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WHAT IT COSTS YOU

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Retailers Pump It Up

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THE MAGAZINE FOR DEMAND DRIVEN LOGISTICS

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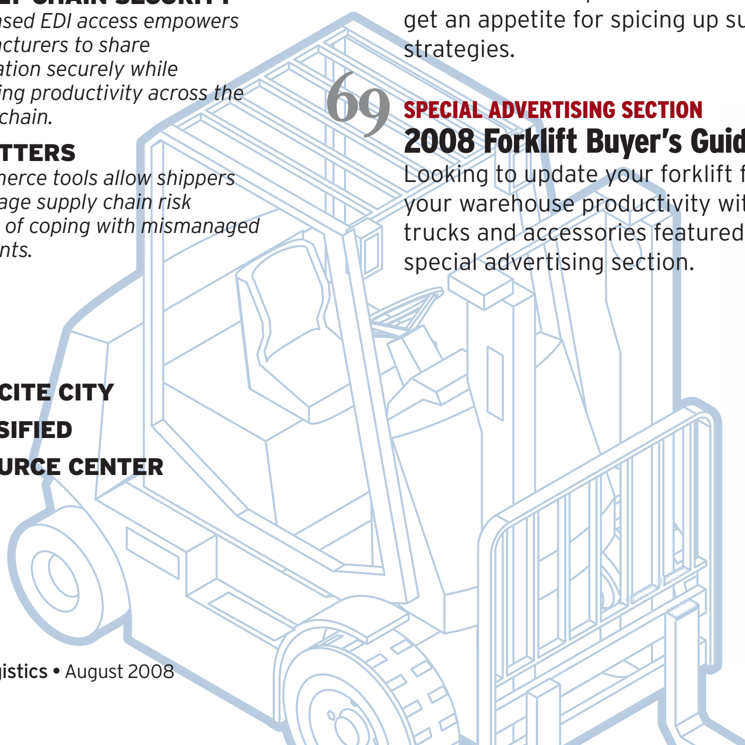
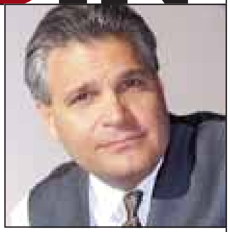


CHECKINGIN



Keith Biondo

by Keith Biondo | **Publisher**

All the Low-Hanging Fruit Have *Not* Yet Been Picked

Many retail logistics practitioners who are good at their jobs will swear to you that all the low-hanging fruit on their optimized logistics tree has already been picked. Sure, one way to face today's challenges is to cut transportation and logistics costs. But what's hanging on the other side of the tree in the orchard of retail success? There may be simple strategies to fast-track sales growth, even in a down economy.

One good idea comes from a recent conversation I had with Randy Fields of Mrs. Fields cookies fame. Randy now heads a company called Park City Group Retail Solutions, Park City, Utah. He conducted a study for a prominent supermarket chain that typically does a good job managing its supply chain. After analyzing one product category with 10 fresh poultry SKUs in 343 stores, Randy's study identified $19.2 million yearly in lost sales opportunities due to stock-outs.

Lesson learned: Stock-out-driven lost sales assume a greater importance in lean times when margins are under siege and as a greater portion of recovered sales goes right to the bottom line.

In a down economy, tuning up your demand-driven logistics practices to gain fuller inventory insight may prevent customers from giving you the brush. Art supply distributor Dick Blick invested in technology to boost inventory accuracy and better match volatile demand signals to supply. "If you order a tube of paint and I send you a brush, you get very mad at us," says John Polillo, executive vice president of operations. Dick Blick fixed it.

Lesson learned: Supply chain excellence gives you happy customers. Happy customers give you more sales. More sales leads to more customers.

Another strategy for boosting sales growth involves promotions. Victoria's Secret, for example, does a stellar job coordinating product promotions and supply chain excellence–crafted to serve demand that is quickly driven up by marketing activities. The mission is to create additional demand and make sure product is there to support it.

Similarly, fast-food retailers in some segments ensure they don't have demand falloff by boosting marketing efforts, pitching special promotions and new menu offerings to craving consumers. Having control over and visibility into inventory gives restaurants such as Steak 'n Shake and Arby's the flexibility to plug limited-time offers (LTOs) into their supply chains, and scale supply to demand to grow market share through new offerings. It also ensures that once they have customers hungry for the promo, they have all the product they need to back it up.

Lesson learned: Advertising and promotion work, even in a down economy. But your promotion efforts better be tied tightly to your supply chain flow or you run the risk of boosting demand while leaving sales on the table.

Bottom line for retail value chain practitioners: customer pickings may be slim, but by checking some branches that are occasionally overlooked, you might find that all the low-hanging fruit have not yet been picked. ■

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10TIPS

STEP-BY-STEP SOLUTIONS

by Deborah Catalano Ruriani

Selecting Global Trade Management Software

Looking for guidance on selecting a flexible global trade management software (GTM) package that easily integrates into your supply chain strategy? Here's some advice from Brian Hodgson, vice president of marketing and business development for Kewill Americas, Marlborough, Mass.

1 **Set clear requirements and well-defined scope.** Determine, for example, whether you need import or export compliance, integration with your customs broker, or a regional or global solution. Understand the unique process requirements that make your company competitive.

2 **Seek out a GTM software provider that thinks global and acts local.** Your partner should have a global presence with local expertise in the areas you serve. The provider should maintain relationships with your supply chain partners to ensure domain knowledge and end-to-end integration.

3 **Focus the ROI on a series of smaller victories.** This approach is more efficient than a multi-year big bang. Small successes might start with automating export documentation, or integrating with brokers or forwarders. As you achieve these wins, you build momentum for additional success, investment, and organizational buy-in.

4 **Look for rapid ERP implementation.** Select a provider with the tools, standard APIs, staff, and record of success in implementing solutions with your ERP provider.

5 **Define a deployment strategy.** Ask potential GTM providers for a sample deployment plan, typical project tasks, and risk management methodologies. Assign an internal project manager to build a strong relationship with the provider's implementation team. Most implementation challenges stem from unplanned change requests, so make sure the process accommodates them.

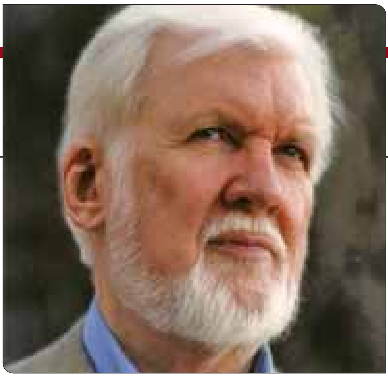
6 **Consider your global reach.** Can the GTM provider and software accommodate current and future country-specific content requirements and meet import and export challenges? Make sure the provider can grow as your needs expand.

7 **Make sure the provider possesses local compliance expertise.** It's crucial that the GTM solution meets local regulatory requirements. The provider's staff must maintain a close relationship with local authorities, associations, and government agencies to stay current on changes.

8 **Define one centralized global item master.** Invest in a single system that manages all global part numbers. This helps you meet both import and export requirements, simplifies your systems, reduces redundancy, ensures compliance, and enables easy integration.

9 **Ensure supply chain integration.** To meet today's growing need for connectivity, make sure the solution can easily integrate with other vendors, suppliers, carriers, brokers, and government agencies. A tightly integrated system provides the efficiencies and productivity gains necessary to deliver a strong return on your investment.

10 **Build internal alignment by getting an executive sponsor and creating a communications plan.** This ensures all internal stakeholders have visibility to the elements surrounding GTM strategy and implementation. With the proper internal team, issues are highlighted early and knocked down quickly. And promoting successes helps increase momentum and support. ■



BY ROBERT A. MALONE
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Inventions Light the Way

Inventions that go beyond mere products to systems are among the world's most valuable. Malcom McLean accomplished this on a scale that continues to influence our global economy today.

The public knows Thomas Edison as the man who invented the light bulb. But what Edison really invented was a system for generating and distributing electricity into cities, and eventually into rural communities. This was a gigantic and, at the time, novel undertaking.

In our industry, Malcom McLean is recognized for inventing the shipping container. The idea sprung from his experience as a trucker trying to deliver loads in Hoboken, N.J., in 1937. McLean felt frustrated by having to wait while the longshoremen manually loaded and unloaded cargo, which could take an average of eight days. It also took many men and cost a bundle. That's when McLean first thought of lifting an existing truck trailer directly onto a ship.

After building a successful trucking business, McLean returned to his container idea 20 years later. Is invention really the persistence of a thought?

At that time, there were two types of commercial hauling vessels: cargo ships and oil tankers. It would have been hard, if not impossible, to lift a trailer onto a cargo ship because the deck was already dominated by cranes, cargo, and access to cargo holds.

Oil tankers, on the other hand, carried nothing above their decks. So McLean bought an oil tanker business and, with financing help from Walter Wriston, the eventual president of Citibank, he bought Waterman Steamship Corporation.

After a good deal of experimentation, McLean came up with a shipping box that measured 8 x 8 x 33 feet. He converted the deck of his *Ideal X* vessel to receive these boxes in 1956, and loaded 53 of them into what became the first containerized ship.

Don't think marching bands and a celebration accompanied this feat. In fact, he elicited an opposite reaction as longshoremen and their supervisors did not see this idea as a positive movement.

The *Ideal X* sailed successfully from Port Newark, N.J., to Houston, Texas. While McLean's company, Sea-Land Service Inc., endured a long period of trial and error and tight money squeezes, Wriston's support never wavered.

As McLean's containerization successes increased, he took the company to Europe in 1966, then on to Asia, where shipping costs were substantially lower. His new box could cut costs by up to 90 percent, and that was hard to argue. The need for efficient shipping to and from Vietnam during the war in some ways clinched the deal.

During the next several decades, containerization dominated world trade and vindicated McLean's vision and practice. The original 53 container capacity had grown to thousands and were transported on specially-designed containerships. Even McLean, if he were alive today, might be surprised by their size, efficiency, and trade dominance. He died in 2001 in relative obscurity.

THINKING OUTSIDE THE BOX

Malcom McLean invented more than just a shipping box. He invented a supply chain system that used the box and containerization as he intended 71 years ago. It may have helped that he started his career as a truck driver and owner because he approached shipping with a fresh eye. He surveyed the ships with their deep cargo holds, onboard cranes and nets, and dozens of longshoremen and thought he could do better. And he did.

Malcom McLean changed the world as fundamentally as Thomas Edison. Edison gave the world an electricity system and McLean made global supply chains an economic reality. ■

READER **PROFILE**

by Merrill Douglas

Going Whole Hog

Farmers feed the world, and Shawn Surber moves the feed. As logistics manager for Premier Feeds in Wilmington, Ohio, Surber coordinates ingredient flow into three feed plants and product delivery to distributors and farmers in his region. He manages a 26-truck fleet, occasionally hopping into the driver's seat himself. When needed, he also lends a hand to Premier's sister companies: grain wholesaler Sabina Farmers Exchange and Premier Crop Services, which sells and applies fertilizers.

Surber's parents have owned the three companies since 1999. He joined the family business when he decided he could make a greater contribution there than by studying agricultural management or global positioning system (GPS) technology in college. He filled several roles at Premier Feeds before taking charge of logistics in 2006.

"I worked on the feed plant's dock, and I mixed feed for a while," he says. "I also drove a truck for a few years, so I understand what our drivers go through."

Premier Feeds' drivers deliver loose and bagged products for a variety of animals, from cattle, hogs, and horses to chinchillas and alpaca.

INFO FEED

NAME:	**Shawn Surber**
TITLE:	Logistics Manager, since 2006
COMPANY:	Premier Feeds, Wilmington, Ohio
PREVIOUS EXPERIENCE:	Farm hand, Cherrybend Pheasant Farm; dock worker, feed mixer, and truck driver for Premier Feeds
EDUCATION:	Attended Southern State Community College for agricultural management and Hocking College for global positioning system technology

The Big Questions

What do you do when you're not at work?
I spend time with my wife and go to my six-year-old daughter's softball games. I also like hunting, fishing, and other outdoor activities.

Business motto?
Treat others the way they want to be treated.

First Web site you look at in the morning?
I read my e-mail, then I check the weather. The weather is especially important for our fertilizer business.

Ideal dinner companion?
My extended family. I greatly enjoy it when we all go out to dinner together.

If you didn't work in supply chain management, what would be your dream job?
Owning a hunting preserve.

What's your idea of a successful day on the job?
To haul more feed than we've ever hauled before, with no mistakes.

Some customers take just a few deliveries a week, but others place a greater demand on the distribution system. For instance, one 400,000-chicken farm in Wheelersburg, Ohio, receives two semi-loads of feed every day.

The biggest logistics challenge, however, is delivering feed to 19 hog facilities spread across seven counties. Some of the barns are bio-secure, which means the animals inside have never been exposed to any viruses or bacteria. Drivers delivering feed to these barns must take precautions–including cleaning and disinfecting their trucks before heading out–to ensure they stay secure.

Because not all hog barns demand the same level of bio-security, freshly cleaned trucks go to the barns that require the most care, then move down the bio-security list to the barns that can stand more exposure. If a less-demanding barn puts in an order first, scheduling can get tricky.

"I have to coordinate where we're going first by determining which truck is clean and can go to which farm," Surber says. "We don't want to wash again; re-washing trucks takes time, and the disinfectant costs add up."

To determine the best delivery routes, Surber uses a bio-security information chart featuring all the hog barns and DeLorme's *Street Atlas USA Plus* software. He hopes to find a tool specially tailored for commercial vehicles.

"I've run into a few instances where the driver couldn't get a truck down a road or over a bridge," he says.

Surber's work day starts by 6:30 a.m., and he's often on the phone helping second-shift drivers late into the evening. There's very little letup in the fast-paced work. "We face ongoing challenges every day," he says.


ANYTHING GOES.
NOAH & SONS
MOVERS
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MOVERS

Whether it's apple crates, brick pallets, cement bags, demolition agents, escalator parts, fresh produce, gigantic cuts of meat, helium tanks, insulation materials, joint sealants, kitchen sinks, levelers, metal piping, nail guns, office supplies, plywood, quilts, roof tiles, steel beams, tires, underground irrigation systems, ventilation cabinets, welding torches, XL dog kennels, young dwarf honeysuckle bushes or zoological documents, the Ford E-Series is built to dominate any job that comes its way. No other line of full-size vans gives you the flexibility to design a vehicle that suits the task at hand. With a best-in-class* GVWR of 14,500 lbs., available 6.8L V10 engine and the widest selection of cutaways on the market, the E-Series has been out-hauling the competition for over 28 years. And with more full-size vans still on the road after 250,000 miles than any other manufacturer,** there's no denying it's Built Ford Tough.

*Class is van-based cutaways. **Based on vehicle registration data and odometer readings available to R. L. Polk & Co. for the 1992-2006 model years for full-size vans still on the road in the U.S. as of March 2007. Mileage data is based on the latest odometer reading available to R. L. Polk & Co.

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TRENDS

As a result of efforts to shift truck traffic to off-peak hours, the Port of Los Angeles reduced gridlock, unclogged bottlenecks, and cut air pollution from idling trucks.

Passing Along Peak Demand

by Joseph O'Reilly

West Coast ports have endured their fair share of growing pains lately, what with congestion and capacity recurring quandaries for stateside shippers and consignees. Still, the ports are moving forward with efforts to increase throughput efficiency by spreading existing traffic across more hours and optimizing valuable port assets.

PierPASS' OffPeak program, for example, has diverted more than nine million truck trips from daytime traffic to off-peak hours since the initiative began three years ago.

The not-for-profit company, created by marine terminal operators at the Los Angeles and Long Beach ports, has developed evening and Saturday shifts to eliminate costly bottlenecks, reduce gridlock on area freeways, and curtail air pollution resulting from idling traffic.

Under the OffPeak program, all international container terminals in the two ports have established five new weekly shifts–Monday through Thursday from 6 p.m. to 3 a.m., and Saturday from 8 a.m. to 6 p.m. As an incentive to use the new shifts and to cover additional costs, most cargo moving during peak hours requires a traffic mitigation fee.

Off-peak shifts handle an average of 68,000 truck trips in a typical week, or about 40 percent of all container moves at the two ports on days with both peak and off-peak shifts. Without the program, most of these trips would shift back into peak daytime traffic Monday through Friday, causing heavy congestion on highways approaching the Los Angeles and Long Beach ports and increasing local air pollution.

An independent review of traffic data near the ports, conducted by BST Associates, an economic research and strategic planning firm, indicates the program is meeting its objective. "At the traffic counter closest to the ports, the share of truck traffic moving off-peak grew from 10 percent in 2004 to 32 percent in 2007," the company reports.

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GTM Market Tracking Up

The fast-changing dynamics of global sourcing and selling, and an equally flux regulatory environment, are creating a growing niche for global trade management (GTM) solutions. The worldwide market for GTM applications will grow at a compounded annual rate of 10.1 percent over the next five years, according to a new ARC Advisory Group study. The Dedham, Mass.-based consultant forecasts the market to surpass $800 million by 2012, up from $503 million in 2007 *(see chart below)*.

ARC slices the GTM market into four solution types: Customs and regulatory compliance; trade financing and financial settlement; ocean/air procurement and contract management; and global trade visibility.

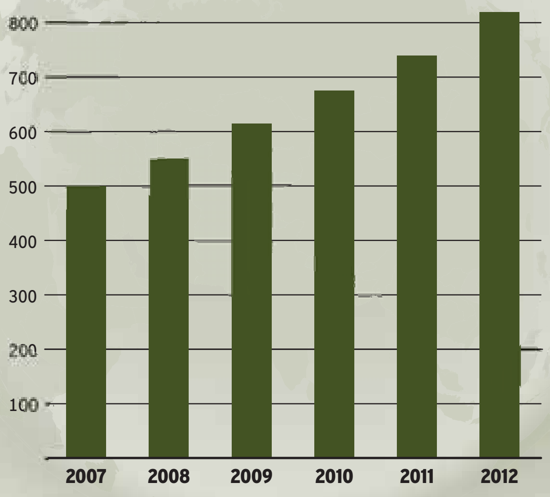
"This is an interesting market where the growth of ERP suppliers with GTM solutions does not come at the expense of certain types of best-of-breed suppliers," reports Steve Banker, service director of supply chain management and principal author of ARC's *Global Trade Management Worldwide Outlook: Market Analysis and Forecast Through 2012*.

Since ARC's last study in 2005, SAP has grown into the largest GTM supplier, with Oracle poised to enter the market and capture a considerable share of demand as well. In contrast to other markets, however, ERP solutions will not replace best-of-breed suppliers, but rather complement them.

Whether ERP or best of breed, GTM solutions must support the "3 Cs"- compliance, content, and connectivity, the study indicates. This means ERP suppliers that utilize SOA software to support complex compliance processes will unhappily share customer accounts with best-of-breed developers that have better networks and/or SaaS platforms, or have better content and connectivity.

Total Business for Global Trade Management, Including Software and Services

($ Millions)



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Wholesale Changes Merit Price Differentiation

As business logistics costs rise and the environment for wholesalers grows more challenging, productivity improvements alone are not enough to boost profitability, notes Tim Emmitt, director in the advisory services practice of Grant Thornton LLP, a Chicago-based global business advisory firm.

While costs continue to soar, productivity (cost per order) remained the same or worsened during the past year for nearly 70 percent of distributors responding to a recent poll. Citing figures from *Distribution 2008*, an annual survey conducted by The Manufacturing Performance Institute, Emmitt noted that distributors face cost increases for nearly every segment of their business, from equipment and IT to labor and logistics/transportation.

To help counter these rising expenses, distributors can use a series of price differentiation methods to better support their value proposition.

"To implement price differentiation, it is important to understand and segregate your customer base, including customers that cost more to service," Emmitt advises.

"Pay attention to customers who value your unique competitive advantages and are willing to pay for them," he adds.

For example, innovative DCs are adopting value-added activities such as repackaging, light manufacturing/assembly, reverse logistics, and sequencing. These services need to be factored into a differentiated pricing strategy.

For many wholesalers, opportunities to streamline pricing structures are within reach.

"Some distribution companies may not know that their existing system may already include at least half the data needed to improve their pricing strategy," Emmitt observes.

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Railroads Building a Sustainable Track

The efficacy of moving more long-haul freight off the highways and onto rail lines has captured greater attention from cost-conscious shippers, largely as a result of current economic constraints and fluctuating capacity needs. But as "green speak" pervades the marketplace, U.S. railroads are making sustainability and efficiency a core value proposition.

Last year, freight railroads were more fuel-efficient than ever, moving one ton of freight an average of 436 miles on each gallon of fuel, a 3.1 percent gain over 2006–or the equivalent of traveling between Baltimore and Boston, reports the American Association of Railroads (AAR). By comparison, in 1980 a gallon of diesel fuel moved one ton of freight an average of 235 miles, representing an 85.5-percent improvement over the last three decades.

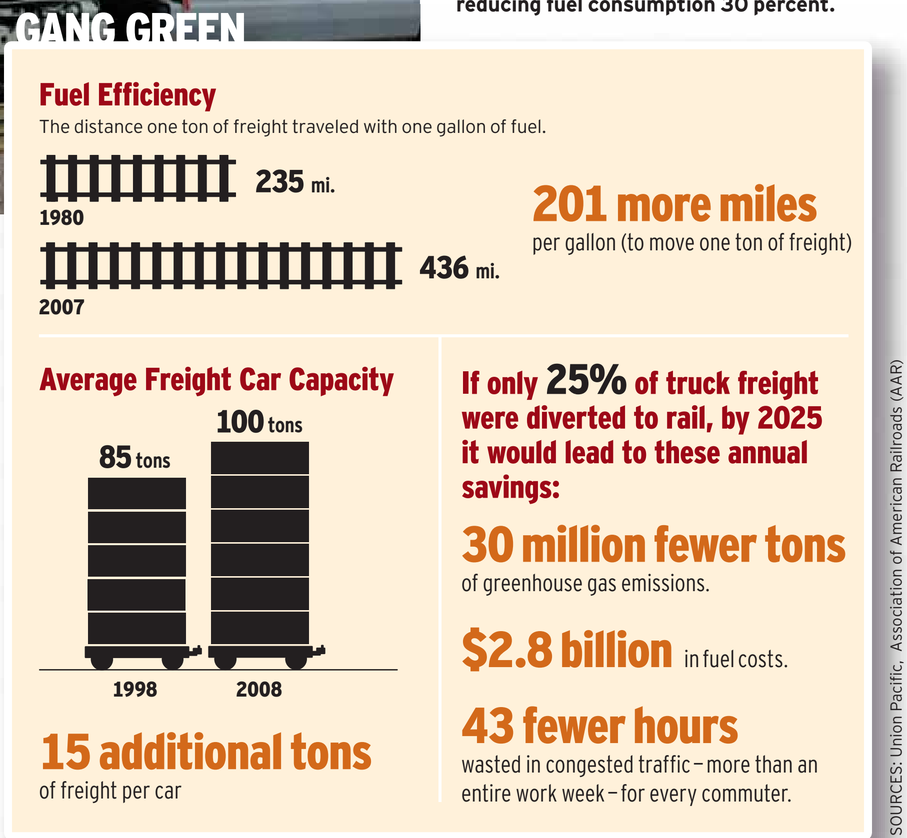
During this same period, freight railroads reduced fuel consumption by 48 billion gallons and carbon dioxide emissions by 538 million tons. If one percent of long-haul freight now moving by highway shifted to rail, shippers could eliminate 1.2 million tons of greenhouse gas emissions annually, according to the American Association of State Highway and Transportation Officials.

At the same time, railroads and rail suppliers have reduced the weight and increased the capacity of rail cars to improve fuel efficiency and cut emissions. Average freight car capacity now stands at nearly 100 tons, up 17 percent from an 85-ton average 20 years ago.

Beyond the practicality of making rail a more important part of the U.S. transportation system, carriers continue to make great strides investing in technologies and equipment that further reduce fuel consumption and emissions.

In May, for example, Union Pacific introduced the first of four next generation Genset locomotives at its J.R. Davis Rail Yard in Roseville, Calif. The new Genset switcher is projected to cut emissions of nitrous oxides by 80 percent and particulate matter by 90 percent, while using up to 30 percent less fuel compared to older switching

Union Pacific's Genset locomotive reflects the industry's commitment to sustainability. The switcher is projected to cut nitrous oxides and particulate matter by more than 80 percent, while reducing fuel consumption 30 percent.



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locomotives. This fuel savings also translates into a reduction of greenhouse gases by up to 30 percent. Other railroads are following suit.

But perhaps the railroad industry's greatest contribution is the broader influence it wields in developing a more diversified and sustainable U.S. freight transportation network. Moving cargo by rail does more than just reduce fuel consumption and pollution; it also alleviates highway congestion and brings more capacity online, giving non-traditional rail/intermodal shippers additional options for streamlining costs.

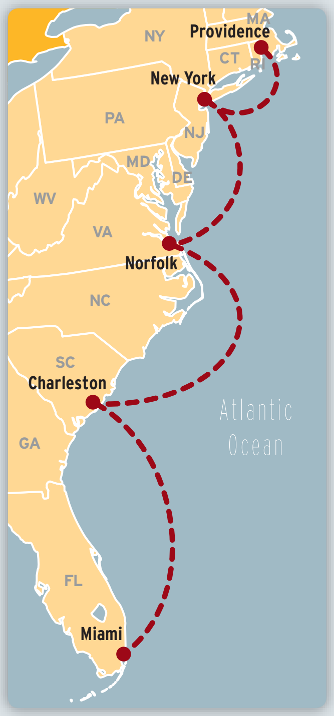
By making the domestic freight industry more competitive, U.S. railroads are bound to have shippers seeing multiple shades of green.

HMT Bill Sets Sail

Domestic shippers exploring alternatives to expensive and congested surface-bound transportation networks may find relief in an unexpected place–the U.S. Senate. Frank R. Lautenberg (D-NJ) has introduced legislation that would exempt "coastwise" container shipping from the Harbor Maintenance Tax (HMT), with the goal of reducing road and rail congestion.

The HMT was implemented in 1986 as a federal tax on freight cargo and cruise ship passenger tickets. Designed to raise revenue and offset harbor infrastructure costs, the tax has accumulated a year-end balance of more than $3.75 billion. Exempting coastwise shipping from the HMT is projected to cost the federal government only a small fraction of this revenue. Such an amendment would incent shippers to consider short-sea shipping routes.

"This bill would make our waterways a more viable and affordable alternative for freight transportation, and help coastal shippers meet increased demand," observes Lautenberg.



Amending the HMT would give U.S. shippers more incentive to consider short-sea shipping alternatives between domestic ports.

Ready to Serve

As further evidence of the synergies between military training and front-line logistics discipline, the U.S. Army Reserve and Con-way Freight have launched the Employer Partnership Initiative. This public-private partnership allows both organizations to recruit, train, and employ individuals interested in serving their country and pursuing a career in freight transportation.

The Army Reserve's partnership with the Ann Arbor, Mich.-based LTL carrier is the first of its kind in the state; and Con-way Freight is the first transportation company to join the new Employer Partnership initiative.

The Employer Partnership seeks to formalize relationships between the Army Reserve and the private sector by establishing a process where both parties can share the talents of trained professionals. Partners such as Con-way, the American Trucking Associations, and Inova Health Systems benefit from employing men and women with military experience and proven leadership skills.

The agreement between the U.S. Army Reserve and Con-way Freight provides reservists opportunities for employment once they successfully complete their military occupational training. ■

GLOBAL LOGISTICS

by Joseph O'Reilly

LETs Light the Way

Logistics service providers are no strangers to handling mission-critical projects. So when natural disasters strike, they serve an important role helping first responders and humanitarian relief agencies bring food and supplies to those in need. They may also bank some valuable experience for helping commercial shippers manage their own supply chain adversities.

Cyclone Nargis, which brought considerable devastation when it made landfall in Myanmar in May, has also brought logistics emergency teams (LETs) together to contribute their resources and expertise in managing the ongoing relief effort. As part of the United Nation's (UN) first-ever deployment of this unique public-private partnership, leading transportation

Global logistics companies have played a critical role in helping deliver aid to cyclone-ravaged Myanmar.

GLOBALLOGISTICS

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and logistics companies such as Agility, TNT, and UPS are supporting the World Food Program (WFP)-led "Global Logistics Cluster" to manage supply chain efforts on the ground in Myanmar and in the critical staging area at Bangkok's Don Muang airport.

During the initial planning phase, LET experts worked in concert with humanitarian logisticians to provide transportation, warehousing, and customs clearance support consultation. Utilizing corporate local knowledge and relationships for the UN's benefit is central to the LET model.

"In the face of such devastation, regional and local business leaders are very interested in supporting the humanitarian operation, but there's often no mechanism to locate and engage them quickly," says Mariam Al Foudery, vice president, corporate social responsibility for Agility. "Because each LET company has a strong local background and network, we are able to provide the bridge to connect humanitarian and commercial networks."

COLLABORATIVE AID

Agility, TNT, and UPS are also collaboratively managing a 65,000-square-foot warehouse in Bangkok to store and redistribute food and supplies to critical areas. With the restoration of Myanmar's Yangon airport, LET staff are also allocating resources there to help local organizations expand warehousing operations and capacity to receive and deliver stockpiled provisions coming in from Thailand.

"Corporate logistics specialists can integrate with humanitarian logistics specialists in warehouse operations to leverage the best of both commercial and humanitarian systems," adds Ludo Oelrich, director of the TNT/WFP partnership. "When we share practices and standards, we increase the speed and efficiency of aid distribution. And when corporations provide additional hands to support these operations, we also allow the UN staff to focus on their critical direct relief work."

GLOBAL SPIN

BA, Iberia to Merge: British Airways and Iberia Airlines look poised to complete a corporate merger that would create the world's third-largest airline by revenue, with combined assets estimated at $25.7 billion. If the deal goes through, British Airways will have the largest stake in a holding company that would allow both airlines to operate separately with their respective brands and licenses. Collectively, the airlines serve 200 destinations with a fleet of 450 aircraft. ■ **CEVA Contraction:** CEVA Logistics is integrating its global contract logistics and freight management businesses in an effort to create a more comprehensive product for its customers. Following the merger of TNT Logistics and EGL Eagle Global Logistics in 2007, the company originally retained the contract logistics and freight management businesses as separate divisions, with the exception of its Asia-Pacific operations, which tested a model integrating the two entities. Following a successful nine-month pilot, the company has now decided to adopt the integrated model globally. The new corporate structure provides one CEVA "face" to the market in an effort to meet customer expectations with integrated solutions.

Mexico's Maquila Sunrise

Shifting global trade dynamics are gradually changing the way foreign enterprises and Mexico's government manage maquiladora manufacturing facilities, according to *Mexico's Maquiladoras–Climbing the Ladder of Success*, a research report from Prologis, a global distribution and facilities owner and developer.

Historically, Mexico has been an attractive location for foreign manufacturing and warehouse operations because of its low-cost labor, proximity to the United States, large pool of university-trained engineers, intellectual property rights, tax incentives, and time zone proximity to many North American companies.

During the past 15 years, the maquiladoras' role has been redefined several times–first, when the North American Free Trade Agreement (NAFTA) took effect in 1994; later, when China joined the World Trade Organization (WTO) in 2001; and later still, when Mexico enacted major tax reforms in 2007. As U.S. interests in near-shore manufacturing take hold and as Southeast Asian markets compete for low-cost sourcing business, Mexico's maquilas are sidestepping potential threats to its export market, according to the report. Moving up the value-added ladder and producing more customized, higher-priced goods, the country is attracting high-value industries including aerospace, custom-ordered electronics, and pharmaceuticals.

Mexico's maquila industry is attracting interest from high-value manufacturers such as Hitachi.

Looking ahead, Mexico's rapidly changing maquiladora sector will continue to fuel the country's economic growth, the Prologis study predicts. Government efforts to invest in cross-border and in-country infrastructure and enact tax and fiscal reforms will only expand the country's expectations for foreign-owned manufacturing facilities.

CONTINUED FROM PAGE 26

Fighting Inflationary Price Fixes

Three macro-economic trends are creating troubling domino effects for global supply chains, reports a new study from New York-based Marsh Inc.'s Supply Chain Risk Management practice. Higher oil prices, combined with rising food and commodity costs, are creating significant upward pricing pressures as companies and their suppliers struggle to adjust to the global credit crunch.

Threats of an international food shortage, soaring prices, and ensuing riots have created costly labor stoppages for some globe-sourcing businesses.

To counter these negative influences and prevent unanticipated supply chain delays and disruptions, Marsh offers three red flags for businesses:

1. Beware of labor unrest. Companies with operations or contract manufacturing in developing nations are at risk for labor unrest and rising production costs, which can be triggered by food price volatility and inflation. In 2007 and 2008, high food prices led to demonstrations and strikes in Mexico, India, Italy, Indonesia, and Egypt. As a result, government actions such as export blockades are becoming common.

2. Beware of fuel prices triggering logistics delays. In 2008, truck driver demonstrations over high fuel costs created temporary transportation slowdowns and stoppages across many parts of Europe, including France, England, Spain, and Portugal.

3. Beware of supplier bankruptcies. As banks tighten global credit lines, suppliers face rising operational costs due to fuel, raw materials, and labor price increases. This has caused a spike in bankruptcies among financially strapped transportation carriers and suppliers. To offset these pricing pressures, some suppliers may delay or only partially order raw materials, skimp on quality, delay hiring or facility expansions, and be less dependable when supply chain disruptions occur. ■

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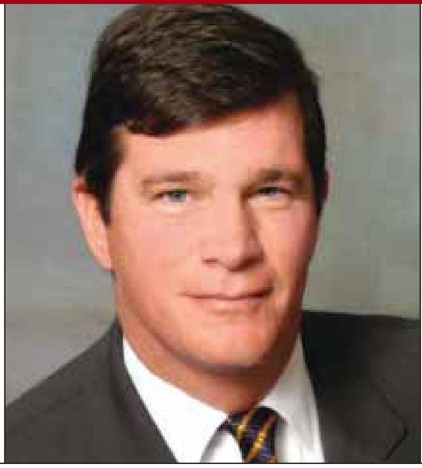

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CARRIERS CORNER

by Hans Hickler

Customer Service: The Two Percent That Matters Most

Evidence abounds that American industry's customer service system is broken. For example, 80 percent of companies believe they provide superior customer service–yet only eight percent of their customers report having received superior service, according to a recent Bain & Company survey. A business that is unaware of its customers' perceptions is headed for trouble.

In the express delivery industry, all three major players perform equally well, averaging 98-percent on-time delivery. But with more than 25 million packages traveling the delivery channels every day, that leaves a half-million shipments that fail to meet customer expectations.

RISING TO THE CHALLENGE

While DHL continues to strive for 100-percent on-time delivery, we recognize that when we fail a customer, we have an opportunity to go above and beyond to remedy the situation, to exceed customer expectations and win lifetime loyalty.

We think in terms of "two is the new 98." Our success hinges not on how we handle the 98 percent of packages that arrive on time, but how we respond to the two percent that don't make it. When we focus on ensuring the final two percent of customers are satisfied, we are on the path to rethinking the total customer experience and servicing all customers well.

To make that kind of paradigm shift, American business needs to promote a mind-set and develop an organization that's focused on exceeding customer expectations. Here are six ways to achieve that goal:

1. Elevate the customer service function within the company, including taking it to the board level. The best service organizations hold an executive accountable for customer experience to help drive internal processes around the customer, and allocate resources and capital spending around the customer experience.

2. Set up a data-driven, systematic approach to problem solving with a focus on customer impact. Methods such as the Six Sigma DMAIC set of practices–which defines, measures, analyzes, improves, and controls internal procedures–rely on tried-and-true ways to measure and respond to customer needs.

3. Identify all customer contact points to better understand which matter most, then measure their performance. Touch point analysis can lead to development of a focused improvement plan in the most critical areas.

4. Evaluate how the organization is structured to ensure the entire spectrum of the customer experience is addressed. Is the sales organization focused on new account acquisition, but lacking in activation, account setup, or ongoing support? Does a sole executive handle both sales and marketing? If so, does that structure dilute accountability and reinforce the need to separate executive oversight?

5. Ensure that employees on the front lines are empowered to assist customers at first contact and handle escalated concerns. Many of the best organizations maintain a separate team to handle the most serious complaints with white gloves.

6. Link employee recognition to behaviors that exemplify customer-focused values and goals. This shows employees the value the company places on them and the roles they play in helping the organization achieve success.

SERVICE INNOVATIONS

The innovations needed in service are about enabling customer success. Companies that can pull ahead of the curve and distinguish themselves on the basis of the customer experience will be the winners in their industries. Progress starts with "planting the flag"–communicating a commitment around a relentless pursuit to deliver a great customer experience. ■

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SUPPLY CHAIN SECURITY

TAKING CARE OF BUSINESS

by Jim Frome

For Your Eyes Only: Safeguarding EDI File Data

We all want the convenience of sharing information seamlessly across departments and business partners. To eliminate cumbersome manual processes, manufacturers share Electronic Data Interchange (EDI) documents–such as shipping notices and purchase orders–with 3PLs, sourcing companies, expeditors, and freight forwarders so that these parties have the information they need.

EDI documents bring manufacturers added convenience and faster time-to-market–but at what cost? With paper records, implicit and explicit rules exist around what information can be shared and who is responsible for which roles. In the transition to online communications, however, technical restrictions often impede these rules from being carried over, which can lead to security breaches, loss of negotiating power, and a host of other troubles.

ACCESS GRANTED

Traditionally, manufacturers have utilized a single EDI account for their entire staff as well as external partners. This simplistic approach has major flaws.

In highly regulated environments, such as pharmaceutical and medical manufacturing, the inability to trace activities back to specific individuals is unacceptable to auditors. In other verticals, such as consumer goods and automotive suppliers, business data could be destructive if it fell into a competitor's hands.

Imagine, for example, if your business rivals knew what you paid for raw goods or how you structured your partnerships. They could easily exploit this information to undercut you in competitive bids or usurp your key alliances by offering a better deal to critical partners.

Revealing certain information to external suppliers can also be detrimental, negating your bargaining position. 3PLs, for example, want access to electronic purchase orders to gather the information they need to package goods. This saves them considerable time, eliminates error-prone data entry, and speeds product delivery. But some purchase order data shouldn't be shared with suppliers.

Say the 3PL realizes that the manufacturer is doing $5 million of business and is only paying five cents a box. The 3PL is likely to push for larger profits if it knows how much the manufacturer is bringing in. Likewise, a manufacturer won't want to let on to outsourced contractors how much it's selling the end product for.

Manufacturers must be careful when sharing remittance advice, which contains bank routing information. One slip in revealing financial information opens the door to potential theft, or worse, embezzlement.

PASSWORD PROTECTION

The best approach to EDI password structure allows a considerable level of granularity. For example, the organization could enable the account manager for customer A to view invoices (without editing them), but not see any information for customer B.

Likewise, manufacturers can share important data with suppliers while shielding confidential information. A company might give its 3PLs access to purchase orders so they know what to pack, but automatically filter out prices and other sensitive information.

Implementing such approaches forces businesses to think about who should have access to what information. This empowers manufacturers to improve processes practically and fluidly.

In a global manufacturing environment, enabling role-based EDI access empowers manufacturers to share information securely while improving productivity across the supply chain. This approach affords the organization control over not only what data employees and external partners see, but also what they do with the information. ■

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ITMATTERS

by John DeBenedette

E-Commerce Tools Can Speed Ocean Trade

In the days before e-commerce, the only way to orchestrate an ocean container shipment was to call and fax every party to the shipment.

This world still exists, but it's fast being superseded by e-commerce tools that free shippers to manage supply chain risk and efficiently serve customers instead of chasing down details and coping with mismanaged shipments.

Technology tools can facilitate each of the four key steps of the shipping process:

1. Planning and optimization. In this phase, shippers are concerned with locating ocean schedules to offer tenders that will lead to bookings. The goal is to gather pertinent cost and lane information from a variety of carriers to refine the tender process.

Some electronic tender management tools claim to seamlessly coordinate the tender process, simplifying the ability to gather and analyze multiple bids from multiple ocean carriers. These tools rank price quotes by trade lane and carrier, instantly providing shippers the cost impact of carrier selection decisions.

Want to learn about ocean schedules? Many platforms serving the ocean trade offer full, Web-based listings of ocean schedules from a variety of carriers.

With this information in hand, it's possible to book electronically. Some tools enable shippers to request booking confirmations, track carrier confirmations, and monitor bookings throughout the entire cycle in one step.

2. Shipment execution. With electronic tools to handle functions such as shipping instructions, shippers can hold carriers accountable for documentation and ensure that instructions are accurate before a bill of lading is generated. These tools support complex booking requirements and can automatically transfer shipping instructions into a bill of lading format for easy viewing. All parties to the shipment receive copies simultaneously.

Some e-commerce platforms serving the ocean container trade support a standardized process for viewing, editing, approving, printing, and archiving bills of lading. Users can print and share documentation with multiple third parties. As a result, shippers and forwarders receive their bills of lading faster and minimize container shipment delays.

3. Data visibility. No longer do shippers have to wait for the freight forwarder to relay information on a shipment by phone or fax. Shipment information is available electronically via the Web or desktop tools, in real-time or close to it.

Visibility applications, such as exception management, help shippers manage inbound and outbound ocean shipments. Shippers set alarms for shipment milestones–time to gate in, time to vessel load, time to gate out, and time to empty return–to quickly find and prioritize potential problem shipments. Armed with this electronic data, shippers are able to follow up in time to recover, by redirecting stock from another location or shipment.

4. Reporting. In the past, developing quarterly reports and assessing carrier and freight forwarder performance was a major undertaking, involving collecting and manually analyzing data about all shipments. Today's e-commerce tools automatically collect an online history that can be displayed with metrics and downloaded for analysis. To share data quickly and efficiently, the reports can be integrated into a shipper's workflow–one of the best ways to analyze and share information that would otherwise require hours to source and compile.

Shippers can join Web or desktop e-commerce platforms that eliminate the need to develop their own complex systems. But whatever channel they choose, they never again have to depend only on phone calls or faxes. ■


PARDON OUR APPEARANCE
WHILE WE OPTIMIZE
OUR SUPPLY CHAIN

RETAIL LOGISTICS: OPEN FOR RENOVATION

by Lisa Harrington

Higher fuel and food costs and a low consumer confidence index led shoppers to put away their wallets in June, plummeting retail sales by the sharpest amount in nearly two years, according to the U.S. Department of Commerce.

"Consumers are currently sitting on the sidelines, causing retailers to focus more intently on cost," notes Richard Jackson, executive vice president, Limited Logistics Services, Columbus, Ohio. "Functional organizations that are responsible for transportation and distribution have to operate even more efficiently."

Retailers are deploying a number of survival strategies and tactics to cope with the U.S. economic downturn. Most of these efforts occur in the background, garnering little fanfare outside their own corporate environs. But in the long run, they play a deciding role in retailers' ability to weather hard times.

Looking at the retail industry holistically, "companies need to work toward visibility–from point of demand all the way back to order of materials, so they know where product is at any given moment in the entire supply chain," suggests Joe Fantasia, a director and lead of Deloitte's retail supply chain practice.

At the same time, retailers have to coordinate all their planning activities. "This means integrating demand planning with overall supply planning, and using this complete picture to drive how the supply chain responds to change most cost-effectively," says Cort Jacoby, also of Deloitte's retail practice. "It means synching up demand from the store-shelf level where consumer decisions are being made, and feeding it back to suppliers."

Two leading retailers–Limited Brands and Dick Blick–seized the current economic downturn as an opportunity to re-think supply chain and warehousing strategies, and implemented new techniques to help weather the storm. Here's how they found opportunity in adversity.

LIMITED BRANDS

A Supply Chain Effort That Knows No Bounds

Founded in 1963 with one women's apparel store in Columbus, Ohio, Limited Brands has developed into a retail powerhouse. Historically, the company was viewed as a multi-divisional, largely apparel-based, popular-priced retailer. Ten years ago–when lingerie, personal care, and beauty items made up less than 30 percent of its sales–that perception was true.

Today's reality is very different. During the past 10 years, Limited Brands has transformed itself – personal care, beauty, and lingerie products now generate more than 70 percent of sales. The company's brands include Victoria's Secret, Pink, Bath & Body Works, C.O. Bigelow, La Senza, White Barn Candle Co., and Henri Bendel. Its products are available in more than 2,900 specialty stores nationwide, through the Victoria's Secret catalog and on four Web sites. Through the La Senza brand, its products are available in Canada, as well as about 40 other countries.

In 2007, Limited Brands opened a state-of-the-art distribution center in Columbus–with the capacity to serve the company for the next 20 years–for Victoria's Secret Direct, its online channel. Limited Brands' direct business totals nearly $1.5 billion in annual sales. The retailer also implemented sophisticated supply chain systems for its Bath & Body Works segment to support growth both domestically and internationally.

Limited Brands' policy is to maintain a sufficient quantity of inventory in its retail stores and distribution centers to provide customers an appropriate selection of current merchandise. It emphasizes rapid turnover and takes markdowns as required to keep merchandise fresh. In anticipation of a continued U.S. economic slowdown, the company took action to reduce retail inventory by 25 percent per square foot at the beginning of 2008.

Limited Brands' operations are seasonal, consisting of two principal selling seasons: spring (the first and second quarters) and fall (the third and fourth quarters).

Bracing for an economic downturn at the start of 2008, Limited Brands cut inventories by 25 percent per square foot at its retail stores including Bath & Body Works and Victoria's Secret.

The fourth quarter, which includes the holiday season, accounted for approximately one-third of net sales over the last three years.

Managing such a highly service-sensitive, fashion-oriented supply chain during the current economic environment makes it more difficult to balance cost with service.

"Economic slowdowns drive retailers to focus more intensely on cost structure," notes Jackson. "Limited Brands has always been vigilant regarding costs. We view our supply chain as a service proposition model of how we move goods quickly and efficiently to stores or directly to consumers. That model has a speed, a service, and a cost associated with it. Fortunately, it presents many opportunities for cost reduction."

EXPECTING THE UNEXPECTED

As stewards of Limited Brands' supply chain, Jackson's group develops contingency plans for unexpected events, such as fuel costs rising to $200 a barrel. "We assess the impact of these kinds of events on our network and come up with alternative cost/service scenarios," Jackson explains.

"For example, do we want to use more ocean transport? Can we reduce the number of store deliveries we make each week, but add more volume per delivery?" he adds. "We also determine the tradeoffs associated with those decisions."

To assess those tradeoffs, the company's 3PL division–Limited Logistics Services–collaborates closely with the brands it supports. "We're prepared if we have to pull the trigger and make changes," Jackson says. "We have to understand how we can best reduce costs without compromising service to the point where it will be detrimental to the brand and its customers."

Limited Brands owns and operates all six of its distribution centers–more than 4.5 million square feet in the Columbus area–and outsources all transportation to third-party providers. "We are interested in better understanding our 3PLs' networks so we can take out transportation and logistics costs collectively," Jackson observes.

During the current economic downturn, Limited Brands is focused intently on moving goods as efficiently and quickly as possible through its six company-owned distribution centers to stores and direct consumers.

The company's intent is not to penalize vendors by beating them up on margins. "We want our 3PLs to come to us with opportunities," Jackson says.

For example, the company's delivery agent, which moves merchandise to stores from 50 cross-dock facilities nationwide, can leverage its infrastructure and trucks across customers, thereby reducing costs through network sharing.

COLLABORATE TO ORCHESTRATE

Limited Logistics Services finds one of the best ways to meet the challenges of the current business climate is to work collaboratively with Limited Brands' marketing and planning organizations to orchestrate operations.

"We need to be able to make changes rapidly around how they want to touch the customer," Jackson says. Such changes can happen weekly, especially in the direct, online channel.

For example, Victoria's Secret Direct may decide to run a promotion–offering special savings on shipping or pushing a particular product group. This promotion falls outside the anticipated schedule. After an email blast goes out, customer response may ratchet up shipment volume dramatically for that week. Jackson's organization must be able to respond rapidly, and adapt its operation to handle the surge.

As an indication of how volatile the retail market has become, last year Limited Logistics Services met weekly with planning and marketing to look at the day-to-day business, and met monthly to look forward. "Now we meet every morning," Jackson reports. "We may not move the dial every day, but we meet to watch it."

While the current retail environment may be challenging, Jackson and his team remain undaunted. "It is healthy for an organization to think about strategies and processes it doesn't usually think about," Jackson believes. "That's what's happening now. Just when you think you're doing a great job, new challenges, such as an economic downturn, arise and you have to find ways to take the business to the next level."

DICK BLICK

Perfecting the Art of Warehouse Management

While it may not be a household name like Victoria's Secret, Chicago-based Dick Blick Company happens to be the largest distributor of art supplies in the country. The nearly 100-year-old company maintains three separate sales channels: individual artists and consumers served via the Web site and mail catalog; schools and institutional businesses served via catalogs and the sales force; and 30-plus retail stores.

"Those three sales channels represent a huge challenge because their order characteristics are drastically different," reports John Polillo, executive vice president of operations for Dick Blick. "A consumer order might be for one or two product lines; a school order is for 15 to 20 lines; retail orders are for hundreds of lines. We stock about 60,000 different SKUs. Spread that order complexity across our large SKU base and you see the operational challenge we face."

Now add the fact that each year Dick Blick's customers expect better service at the same or lower cost.

The art supply company operates two distribution centers in Galesburg, Ill. A 150,000-square-foot facility that handles conveyable items is highly automated, housing two to three miles of conveyors and carousels. By contrast, its non-conveyable products DC, a low-tech, 400,000-square-foot facility, uses pallets and carts for materials handling.

Dick Blick serves most of its consumer and education customers from the two DCs, with some direct drop-shipping of high-value items. Until two years ago, it used a paper-based system to manage these facilities.

To stock its large (about 20,000 square feet) retail stores, Dick Blick direct-ships about two-thirds of the merchandise from vendors; the balance is shipped from its DCs. Those percentages are flipped in the smaller (about 5,000 square feet) stores, with 80 percent of product coming from the DCs, and the remaining 20 percent direct-shipped from vendors.

Dick Blick was chronically plagued with maintaining accurate inventory. "It was easy to pick and receive wrong items," Polillo acknowledges. "If a receipt was identified wrong, the product was put away wrong and picked wrong. All sorts of problems would develop as a result. Once a year, we had to shut down and spend four days locating every product in every nook and cranny of the warehouses to reconcile the inventory."

In the conveyable DC, product characteristics made order-picking accuracy difficult. "A paint line might comprise 72 colors, for example, and other than tiny type on the tube, they all look the same," Polillo explains. "If a worker is doing each-picking for a customer, and the turquoise and aquamarine tubes are next to each other on the rack, it's easy to pick the wrong tube."

This largely manual warehouse management system caused additional problems. For example, warehouse employees had to pick by order–taking a packing list to different warehouse zones, adding boxes as needed to fill an order. "Manually keeping two to six boxes together is a problem," notes Polillo.

To remedy these and a host of other issues, two years ago Dick Blick installed a warehouse management system (WMS) from software solutions provider RedPrairie, Waukesha, Wisc. While interested in the overall capabilities of the WMS, the company was primarily focused on the solution's labor management module.

After implementing the WMS solution, Dick Blick added the labor management module six months ago. Today, the system tracks every warehouse task–every pick, put away, and receipt–and compares actual task performance time to estimated time.

"We used to manage on gut feel," Polillo says. "Now the WMS monitors and manages employee productivity."

Thanks to the cycle-counting module, as well as RF scanning technology, the art supply distributor's inventory accuracy currently stands at 99.99 percent. "And we don't have to shut down for four days," Polillo notes.

Dick Blick can also email to customers–in this case, retail stores–a packing


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LOGISTICS
WORLDWIDE

list identifying the exact contents of each carton in advance of a shipment. "This is important to stores because when the shipment arrives, they can go to the right carton and immediately pull out what they need," Polillo explains.

Dick Blick's WMS has produced specific service improvements–reducing the customer return rate for shipment errors from 3.5 percent to 1.9 percent, and improving pick accuracy from 98.7 percent to 99.2 percent.

MAKING BETTER MISTAKES

Those numbers are impressive. But what's more impressive is how the system changed the types of mistakes the company makes. "Before using the WMS, of the 1.3 percent of lines that were wrong, 80 percent were delivering the wrong item to the customer; 20 percent were delivering the wrong quantity," Polillo reports. "Now, shipping accuracy is 99.2 percent, with about 80 percent of those .8 the wrong quantity and 20 percent the wrong item."

This is an important difference. "If customers order a tube of paint and we ship a brush, they get mad," Polillo explains. "But if they order one tube of paint and we ship three, they don't care."

The WMS has enabled Dick Blick to grow its product base, adding 12,000 SKUs in two years. "We used a manual system to manage 48,000 SKUs and tore our hair out," Polillo recalls. "Now we can easily manage the growing base."

After two years of operating the WMS, Dick Blick has begun to mine a treasure trove of information about distribution processes. "We can develop in-depth analytical reports to help management make better decisions," Polillo concludes.

Making strong decisions and reinventing operations is no longer optional for retailers such as Limited Brands and Dick Blick, says Deloitte's Joe Fantasia.

"Retailers have reached the point where, to remain competitive, their supply chain operations have to change," he says. "The drastic rise in fuel costs was the best thing to happen to the supply chain segment. It grabbed the attention of the executive suite, and that opens the door for real change." ■

10 RETAILER SURVIVAL CHECKLIST

techniques & strategies for weathering an economic downturn

1. It may sound obvious, but selective price hikes work well. Test different prices on the same product to see what works best.

2. Aggressively promote products whose prices have not yet gone up.

3. Coordinate product promotions even more closely to demand, which leverages every sale the promotion creates.

4. Know what you have on hand. Some readers report product lost in supply chain back alleys and warehouse Bermuda Triangles. Don't assume all your inventory is accounted for. You may be surprised.

5. Hoard inventory against expected continuing price hikes. Inventory arbitrage may be effective in some cases, but be mindful of fickle consumer demand, inventory total cost of ownership, and currency fluctuation. For example, if the dollar rises quickly, an increase in purchasing power could wipe out any savings.

6. Emphasize to team members that customer service ensures job security, especially when things go awry. With all the competitive choices, the customer is "kingier." Happy customers mean more sales, keeping jobs secure.

7. Cut transport costs by thinking of "competitors" when forging infrastructure, shipment consolidation, and capacity-boosting initiatives. Share the wheel instead of reinventing it.

8. Where possible, work with suppliers long-range to move manufacture/supply facilities closer to demand. One example: the cost of inbound containers has risen enough to spur reexamination of sourcing from North American vs. Pacific Rim locations.

9. Improve demand-driven logistics practices to aggressively limit stock-outs. How many sales are you losing to stock-outs? How is that diminishing your brand over the long haul?

10. Supply chain excellence gives your customers more products and reasons to buy and fewer reasons to go to your competitors.

"Hi there! Welcome to Fast Food
order?" "Yes, I'd like to try your
like that per drink?" "Actually, how
nuts. And can I get an extra side of
also super-size that with one of our
Dip Freight Flip Deluxe.'" "Ooh...
get better control over your inbound
where, and get transportation and
one low price." "Wow. What does
visibility into your cost structures,
mization, freight brokerage, vendor
fixings – all at a great price!" "Can
"Sorry...gas is included." "OK, then...
whole enchilada." "Great. Please

Logistics. May I please take your
'Freight Rate Nibbler.'" "Would you
about a full-system install, soup to
visibility with that?" "Sure. You can
new value offerings, the 'Double
that sounds good!" "It sure is! You
cravings, tip spend on its end else-
purchasing management all for
that come with?" "You get total
plus your choice of inventory opti-
management, and a full range of
I get that with no fuel surcharge?"
let's have the
drive around!"

FAST FOOD LOGISTICS

HAVING IT YOUR WAY ›

by Joseph O'Reilly

Variety and freshness are paramount to keeping fast-food customers hungry for more and supply lines and inventory ripe and ready for change. Fast-food chains look to logistics service providers with a similar craving for made-to-order selectivity, quality, and service–all at an affordable cost.

Delivering quick meals at reasonable prices in an ever-changing marketplace is no small billing, especially as chains prep against soaring fuel costs, product quality concerns, and nutritional mandates. Moreover, average-Joe consumers are fickle about what they like and how they like it. Restaurants routinely cook up new menu items and marketing gimmicks, then work with distributors and service providers to bring new ingredients to the back door, items to the menu, and meals to the table–with flexibility and speed you won't find in bumper-to-bumper drive-through lanes.

"Both speed-to-market and speed-out-of-market demands make the food service industry unique," observes Scott Deibert, vice president of supply chain for Steak 'n Shake, an Indianapolis-based chain. "A continuous stream of limited-time offers (LTOs) requires planning promotions and managing variables within a flexible supply system. Obsolete inventory means you have too much; dissatisfied customers means you have too little."

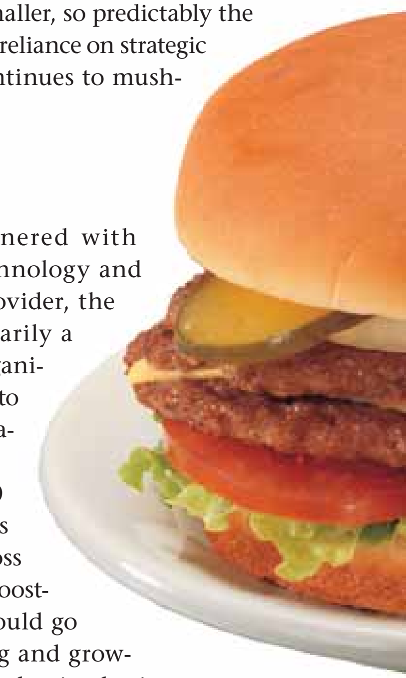
Over the past few years, the supply chain demands of LTO promotions have set the industry apart, placing a premium on keeping stocks low, turning inventory, and delivering perishable shipments with just-in-time urgency and care.

"The shelf life of food requires a management strategy that other industries do not. We have to drive more frequent inventory turns from supplier to chain operator," says David Cox, president of ARCOP, a purchasing and distribution cooperative for Atlanta-based Arby's.

Beyond speed and reliability, quick-service restaurants are all about value, preparing meals at the lowest cost possible. This sensitivity to cost permeates the segment, and raises the stakes for reducing transportation and inventory carrying costs up and down the supply chain.

"Given where today's commodity markets are–from fuel to grains–it's one of the most difficult times the fast-food sector has faced. We're peeling back every layer of the onion to identify hidden and total landed costs," says Cox.

That onion keeps getting smaller, so predictably the industry's commitment to and reliance on strategic outsourcing partnerships continues to mushroom in importance.



"In and Out. That's What Fast Food Is All About"

When ARCOP first partnered with ArrowStream, a Chicago technology and freight logistics solutions provider, the Arby's cooperative was primarily a nuts-and-bolts purchasing organization. "We needed to evolve into a world-class supply chain organization," says Cox.

ARCOP, which serves 3,600 corporate-owned restaurants and individual franchises across the country, recognized that boosting supply chain visibility could go a long way toward preserving and growing brand loyalty, while strengthening business relationships.

"Before partnering with ArrowStream three years ago we had little visibility. Our mentality was 'green visor, rubber mallet'–beat the supplier over the head to get the right price," Cox acknowledges. "But we realized we had to develop stronger relationships with suppliers and distributors and drive greater visibility to manage the supply chain–increase connectivity among our 17 DCs and gain deeper insight into purchase orders and inventory levels."

Restaurants traditionally have a poor view of their supply chains, largely because they work with multiple independent distributors, observes Rodger Mullen, president and COO of ArrowStream. Networks are often not dedicated, but rather a patchwork of disparate systems, so visibility into the flow of goods from manufacturer to restaurant is lacking.

Mounting price pressures and consumer demand for more stringent quality standards and controls, however, are pressing chain operators and distributors to aggregate greater control over inventory and shipments. To fill this gap and serve as a conduit for improved connectivity, ArrowStream provides an umbrella operating system with plug-in applications that help food service businesses better manage their supply chains.

Using the 3PL's *OnDemand* suite of supply chain solutions, ARCOP now can ascertain complete store stock visibility, monitor exceptions, assess inventory needs, and track product movement from supplier to chain daily.

"Most operators order from the distributor electronically. So we establish landed costs for the distributors, and restaurant chains order product directly from the DC," explains Cox.

Having this detailed level of data allows both Arby's and ARCOP to capture demand signals and position inventory for optimal efficiency when expanding or contracting special promotions. Supply chain transparency is a make-or-break deal when serving up LTOs.

"The visibility we have into product movement enables us to effectively and efficiently manage supply during LTOs. Instant visibility lets us scale back or scale up production, or to move product between DCs to minimize outages or obsolete inventory," Cox observes.

Consequently, Arby's has enjoyed considerable success exploring and executing new LTOs and menu items. When it first began working with ArrowStream, it managed 19 different promotions and 41 new SKUs every year. Now those numbers have climbed to 51 promotions and 124 new SKUs. The complexity of planning new offerings and aligning distribution and supply lines within tight time parameters, and with little room for error, warrants visibility and flexibility.

"Companies that can manage LTOs properly and more frequently gain a distinct advantage over competitors," says Cox.

"Better Ingredients. Better Outsourcing"

Restaurant chains and distributors have found similar success leveraging ArrowStream's freight optimization network to enhance visibility into transportation costs, and therefore create more efficient loads and routings.

Prior to outsourcing its freight management in 2006, Steak 'n Shake was limited in how it could efficiently and economically match demand with available assets, then streamline routes and optimize capacity utilization among its 503 U.S. restaurants. As a result, it often used more expensive less-than-truckload (LTL) shipments to meet replenishment needs.

Straddling the casual dining and fast-food divide with a production system oriented to both make-to-order meals and drive-through business, Steak 'n Shake's business model and supply chain demands flexibility–the kind that can pool shipments and consolidate transportation moves to reduce costs.

ArrowStream's transportation network delivers just that: leveraging volume from more than 200 distribution centers and 61,000 trucking lanes to create cost-efficient full truckloads and optimal routing. As ArrowStream brings new customers, DCs, and suppliers online, it optimizes the network–continuous improvement that Deibert values as he streamlines Steak 'n Shake's supply chain.

The altruism created among chains, distributors, and suppliers makes ArrowStream's network unique. The 3PL optimizes its network as a collective so everyone shares in that gain.

Small chains such as Steak 'n Shake secure access to a larger freight network that includes bigger restaurants, and can leverage critical mass to pool shipments and consolidate loads to drive down transport costs. "Even large networks can gain efficiencies by adding smaller ones," says Mullen.

For fast-food chains such as Arby's, limited-time offers keep customers coming back for more. The restaurant, and its purchasing cooperative, use ArrowStream technology to ramp up and scale back inventory to support special promotions.

This breadth of resources and visibility allows chains to break out freight costs and identify where inefficiencies reside, rather than simply negotiating with carriers on price alone.

"ArrowStream removes the blinders upstream and downstream to identify revenue opportunities," explains Deibert. "Instead of only using my single chain freight volume and getting inefficient freight quotes limited to Point A to Point B, now I am able to bundle my shipments with all the routes and freight volume in the ArrowStream network, from Points A to B to C and back to A."

The 3PL's scale delivers value in spades. "Twenty in-house workers could never achieve what ArrowStream accomplishes because of this wealth of information," he adds.

Consequently, using ArrowStream, Steak 'n Shake has cut 25 percent from its transportation costs, and Deibert predicts efficiencies and savings will continue.

ARCOP, which initially partnered with ArrowStream to increase its IT bandwidth, has likewise found the freight network to be gravy, says Cox.

"ArrowStream has visibility into its entire transportation network, which gives us the ability to pair up movements with different customers in similar locations," he says. "It

helps us move freight at a lower cost. This is where efficiencies come into play."

Choosing from a broader network of carriers and lanes gives ARCOP greater control over inbound moves and the flexibility to specify transportation from suppliers if warranted. "Our freight efficiencies result from improving how our suppliers move product to our distribution centers," Cox observes.

"When You're Here, You're Family"

This demand-driven pulse is beating throughout the fast-food industry, and swayed The SYGMA Network, Dublin, Ohio, to outsource its freight management to ArrowStream.

Distributing food products exclusively to chain operators, SYGMA, a wholly owned subsidiary of Sysco Corporation, realized that as customers demanded more control over their own inbound moves, margins for improving transportation management in-house were shrinking.

Instead of competing against chains to squeeze and recoup costs, in 2002 SYGMA took a more pragmatic approach. It partnered with ArrowStream to coordinate transportation from suppliers and use its network to optimize supply chain operations.

The benefits have been clear. On the outbound side, the distributor reduced delivery frequencies, rationalized inventory vs. miles run, located more inventory in more DCs, and cut distribution distances.

For inbound moves, "it's all about creating efficiencies, making it a win-win for us and our customers. In the past, our collective goals weren't aligned," says Steve Deasey, president and COO of The SYGMA Network.

Shipments in ArrowStream's network are planned to create more continuous loops, so truckloads are optimally loaded when they move in and out of warehouse facilities. For asset-based distributors that run their own fleet of trucks, such as SYGMA, the 3PL's freight optimization and modeling capabilities allow them to fill backhaul volumes and analyze asset utilization.

This level of control extends back to SYGMA's suppliers, where ArrowStream is helping manage inbound moves. "Eighty percent of inbound shipments into a distributor are manufacturer delivered, which means that leg has not been optimized for efficiency within the network," says Mullen. "The manufacturer dictates the third-party carrier and bundles transportation into the overall cost."

ArrowStream is converting some inbound volumes into 3PL-managed routes. Transportation costs remain the same, but distributors and restaurants realize additional income. Mullen has also seen growing interest from manufacturers looking to divorce themselves from the freight aspect of the business entirely.

Above all, greater networking among partners creates a tighter supply chain. "Not only do we deliver greater inbound freight savings to customers, but we act as a long-term partner," Deasey says. "This commitment to sharing data in the system creates a stronger distributor-chain bond that is difficult to break and makes it less likely that a customer will switch to another distributor."

"Now That Your Tastes Have Grown Up"

As with any successful outsourcing relationship, divesting non-core freight management responsibilities allows Steak 'n Shake the time and operational bandwidth to concentrate on uncovering efficiencies elsewhere in its supply chain.

"With commodity prices as they are, we can focus on underlying cost structures in product manufacturing–analyzing inefficiencies at the back door of the supply chain," says Deibert.

This raises other questions: Are distributors operating as efficiently as they can? Are suppliers in the right locations?

The data Steak 'n Shake draws from ArrowStream's network provides a valuable resource when creating RFPs for new distribution centers. "It gives us a data package that we can take to potential partners so they can provide more accurate proposals," Deibert explains.

The restaurant is also exploring the connectivity between its DCs and suppliers to tighten slack networks.

"In the past, large DCs would move product long distances, with the focus on optimizing the facility," Deibert adds. "Today the inclination is toward mixing centers that feed smaller facilities located closer to the marketplace. A hub-and-spoke model requires determining where to locate suppliers."

Using ArrowStream's optimization and modeling technologies, Steak 'n Shake can compare lane/rate bases and configure optimal distribution networks.

Moving forward, Deibert also sees a ripe opportunity to rethink how the restaurant manages its lone distribution facility in Bloomington, Ill. "We would like ArrowStream to manage inventory in the facility. Because it has visibility into all our outbound moves and purchase order placement, it has the flexibility to create greater efficiencies," he says.

Deibert compares such a scenario to vendor-managed inventory, using a third-party logistics provider instead of a manufacturer. Because it has total inventory visibility within Steak 'n Shake's system, placing ownership of product with ArrowStream might present even greater incentive to drive efficiencies and cost savings.

"This would provide us with the ultimate outsourcing control," says Deibert.

"In Sight It Must Be Right"

Both SYGMA and ARCOP recognize the value ArrowStream brings to improving transparency within the fast-food chain so partners can measure and track product quality, then trace problem inventory if recalls occur. This is especially true for franchises that purchase product from local sources outside their centralized supply networks.

"Historically, produce would largely be sourced and purchased locally," says Deasey. "In light of the recent salmonella

By outsourcing freight management to ArrowStream, Steak 'n Shake can dip into a larger pool of distribution centers and truck lanes to consolidate loads and reduce transport costs.

scares, chain operators want greater control. They are moving toward centralizing purchasing and bringing products through main distributors."

ARCOP, for example, is looking to integrate localized supply bases into its network. "Certain food categories, such as produce and baked goods, still rely on local purchasing," Deasey adds. "Some franchises buy from local suppliers who fall off the radar screen. We'd like to move them into a structured DC channel."

Managing supply chain partners under one operating system only increases accountability, as well as collaborative responsiveness when exceptions inevitably materialize.

Even as transportation and commodity costs and a recent spate of produce recalls force corporate introspection with a corrective mindset, Mullen sees opportunities where the ArrowStream network can help shippers exploit new opportunities while addressing existing concerns–for example, meeting green mandates and consolidating loads to reduce transport spend.

"Logistically, we want to build more efficient truckloads," Mullen says. "We want to cube out trucks, make 36,000-pound loads 44,000 pounds, route four percent empty miles vs. 10 percent empty miles. This equates to less energy use.

"By doubling network optimization, we want to reduce shipments, which alleviates cost, capacity, and driver turnover pressures," he says.

Tough economic times are taking their toll across the industry, Deasey acknowledges. When your value proposition is delivering value, and costs are rising, putting freight management in capable hands makes sense.

"We're in a better position to withstand the current economic downturn and well-positioned for when things turn around," he says.

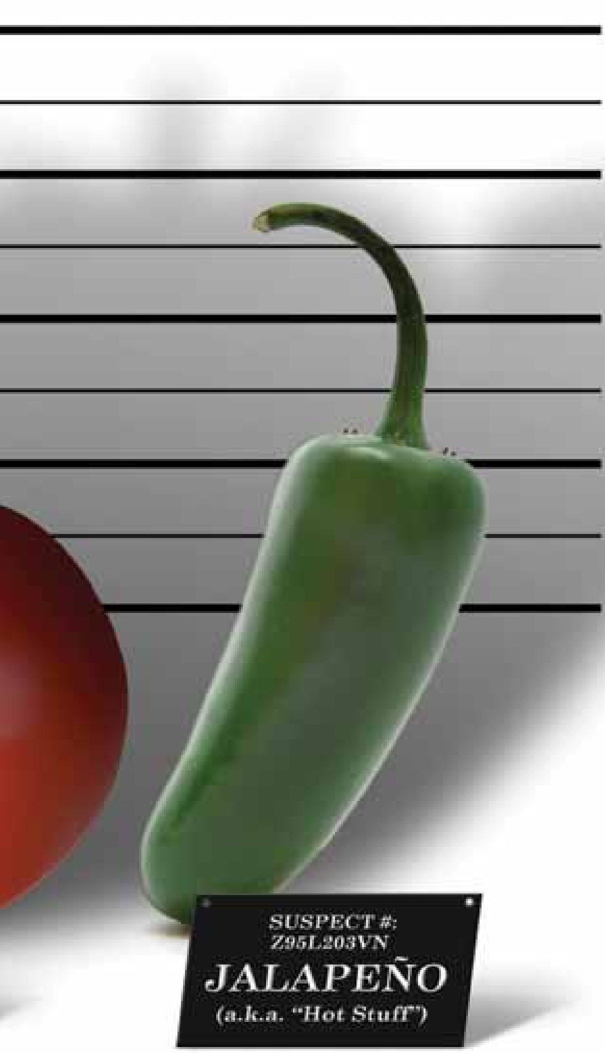
Limited-time offers come and go in the fast-food industry. ArrowStream is giving restaurants and distributors some food for thought, with an outsourcing promotion that has long-term appeal. ■

[OVERVIEW]

Food Logistics: A Lineup of Challenges

With safety and recalls, sustainability, rising costs, and infrastructure improvements the usual suspects, food companies investigate strategies for locking down supply chain management efficiencies. BY LISA TERRY

SNAPSHOT
FOOD



Executives in the food supply chain face vexing challenges, such as ensuring product safety and paying escalating fuel prices to transport raw materials. Consumers are growing more demanding and fickle, challenging food producers to rapidly deliver new products and trim cycle times. Increasingly, food executives must solve all these issues in the most environmentally friendly way.

Safety Under Scrutiny

The next iteration of TV's famed forensics franchise might well be called *CSI: Food Contamination*. Daily news reports in July investigated the E. coli contamination that sickened hundreds. Tomatoes were the initial chief suspects, then jalapeno peppers fell under suspicion. Production and distribution chains were scrutinized to determine the scene of the crime.

The Bioterrorism Act of 2002 required food companies that hadn't already implemented track-and-trace capabilities to do so. Well-publicized recalls–pet food, beef, tomatoes, among others–have turned up the heat on ensuring recall readiness.

"We used to conduct quarterly mock product recalls; we now do them weekly and allow ourselves only one hour for completion," says Rick Schlapman, national sales manager, food products, for WOW Logistics, an Appleton, Wisc.-based 3PL that specializes in dairy products. "Companies are also conducting more thorough and in-depth warehouse audits."

To ensure this kind of rapid response, food companies are investing in new processes and technologies–from more frequent temperature monitoring and inspections to increased use of mobile technology, global positioning systems, trailer seals, RFID, and biometrics.

Outside compliance, though, food companies generally have invested less in technology than other industries, where the real return on investment, and benefits such as increased visibility, lie, says Warren Sumner, vice president of marketing and products for ClearOrbit, an Austin, Texas-based software developer.

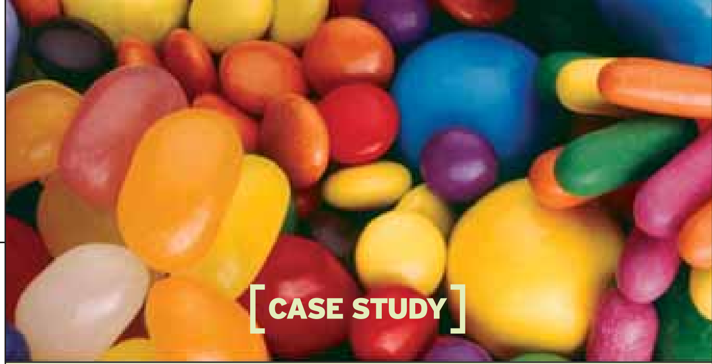
As international sourcing increases, those disconnects become more apparent, driving food companies to begin schooling non-U.S. suppliers in protocols such as Hazard Analysis and Critical Control Point (HACCP), a U.S. regulation devised to prevent food-borne illness resulting from juice, meat, poultry, and seafood processing.

In September 2007, the Grocery Manufacturers of America (GMA) announced a four-part program for strengthening, modernizing, and improving the safety of food and food ingredients imported into the United States. This entails a foreign supplier quality assurance program; faster border crossings for FDA-approved products from higher-risk countries; helping foreign governments bring food safety standards in line with the United States; and expanding FDA resources.

Sustainable Awakening

The U.S. food industry is responsible for five percent of domestic energy use and 18 percent of greenhouse gas emissions, according to a GMA Environmental Sustainability Summit presentation. While agriculture accounts for half those emissions, four percent comes from food transportation activities, increasing pressure on logistics executives to address this area.

Major food players have already announced plans to cut their carbon footprints. As the definition of "green" and "sustainable" evolves, food companies are launching initiatives on several fronts–from reducing packaging and rethinking distribution and logistics strategies to seeking alternative energy



Colorcon: An Appetite for Lot and Inventory Tracking

Some familiar candies wouldn't be their shiny, bright selves without coatings provided by Colorcon, West Point, Pa., which also makes polishes, colorants, and non-toxic inks, including those used on food packages.

Because the company also provides coatings and formulations for pharmaceuticals, food manufacturers sourcing from Colorcon gain the benefit of rigorous compliance and accuracy practices already in place.

Those practices are particularly essential with today's increased focus on safety and traceability. Manufacturers are under pressure to trace products back to specific lots, raw materials sources, and suppliers who must also be trusted to comply with these standards.

To address its own materials movement and ensure accurate tracking, Colorcon uses *Gemini* software for discrete manufacturers from ClearOrbit, an Austin, Texas-based provider of supply chain execution and reverse logistics software solutions.

"The company is batch-oriented," notes Perry Cozzone, Colorcon's vice president and chief information officer. "It's important that we record material movement accurately, confirm material status, determine whether materials have been moved to the appropriate place, and perform certification."

Inbound materials cannot be released for use until Colorcon tests them and verifies the results. Then the software tracks the location and use of the materials as they move through the production process. *Gemini* controls the bar-code scanning inputs and outputs that document the movement of goods from receipt through shipping. Tight integration with Oracle's process manufacturing system ensures the required visibility and reporting with error-free data. Colorcon uses identical solutions across its eight worldwide plants.

Thanks to ClearOrbit's software, Colorcon's lot tracking is more accurate and efficient than its previous, manual approach. If a customer inquires about a batch, the company can now easily track the material in question.

The system has enabled Colorcon to achieve internal operational benefits as well as meet its customers' thorough and frequent auditing requirements.

sources and imposing more fuel-efficient transport processes and technologies. Some notable examples:

› Minneapolis-based **General Mills** has pledged to cut both energy use and greenhouse gas emissions by 15 percent between 2005 and 2010.

› Supermarket chain **Safeway** is one of the top retail purchasers of wind power. It buys enough wind energy to run all its fuel stations and stores in Boulder, Colo., and San Francisco, as well as its Pleasanton, Calif., corporate offices.

› **Stonyfield Farm**, Londonderry, N.H., has stepped to the forefront of the green effort by using solar energy, implementing widespread recycling programs, and moving from less-than-truckload to full truckload, multi-stop shipments. As a result, it has cut freight costs up to 11 percent and mileage by as much as 58 percent.

› **Sunsweet Growers**, a Yuba City, Calif., farmer-owned marketing cooperative, is focusing on packaging. It is shifting to plastic bottles and replacing full cartons with tray cases, which include a top and bottom but just a one-inch lip on the sides. The cases are shrink-wrapped for shipment, reducing fiber use by 35 percent.

Despite these efforts, there are more questions than answers when it comes to green issues: what to measure, what steps to take, and whether sustainability investments pay off.

"There is quite a bit of discussion in the food industry but a hesitancy to be first," acknowledges ClearOrbit's Sumner. "Carbon is another constraint in the supply chain

[CASE STUDY]

Sunsweet: Pruning Seasonal Demand

Predicting demand, weathering the economy, and responding to escalating fuel costs are challenging for any manufacturer. When your goods come out of the ground, you must also account for yield variances; this year's poor showing can give way to next year's bumper crop.

So Sunsweet Growers, a farmer cooperative based in Yuba City, Calif., relies on sales and operations planning (S&OP) to help smooth the bumps that any one of these factors can cause. Sunsweet produces more than one-third of the world's prune crop, as well as other dried fruits.

The company implemented *Zemeter*, a supply chain planning suite from software developer Supply Chain Consultants, Wilmington, Del., just in time to meet a crisis when, in 2005, prunes had their worst season in 30 years.

"It was a great test for the new system, which features demand planning, S&OP support, and plant scheduling," says Bryce Treese, director of supply chain for Sunsweet. "It helped us forecast well in advance when we'd run out of fruit so we could plan inventory needs and get through the period smoothly."

Changing market demands continue to test the functionality of Sunsweet's system. After 2006's adequate yield, 2007 was its second-worst crop, and 2008 is due to run short. Treese expects its S&OP will help Sunsweet pull back to lower inventory levels through summer.

But Sunweet must balance planning against high fuel costs that can eat into that hasn't been fully modeled yet, but needs to be."

Sustainability issues could even prompt a shortening of supply chains after many businesses extended their reach to pursue the least expensive and most plentiful sources of supply. "At what price point will we no longer be willing to pay for year-round fruit?" Sumner asks.

Slimming Down Costs

Consumer packaged goods manufacturers are cutting costs and boosting efficiencies to offset high fuel and commodity prices and prevent overall logistics costs from rising, according to a May 2008 IBM study conducted on behalf of the Grocery Manufacturers Association. Logistics costs as a percentage of sales have remained relatively flat in recent years.

To continue to hold or even reduce logistics costs, "companies are taking a fresh look at distribution patterns," says Stephen Cook, vice president of marketing and business development at Saddle Creek, a third-party logistics provider based in Lakeland, Fla. "Economic conditions can act as a catalyst for companies to seek new ways of doing things."

Food companies are considering or undertaking the following cost-cutting strategies:

- Cross-docking
- Re-examining direct store delivery vs. retail distribution
- Increasing use of rail
- More efficient production and supply chain planning
- Training drivers and enacting processes to streamline deliveries
- Postponing packaging

profitability. The manufacturer is working to build up East Coast inventories by shipping early from western plants via intermodal rather than trucks, cutting transportation costs. *Zemeter* helps determine where that makes sense, and how to produce to implement that plan. Other planning decision points include whether to store dried fruit or turn it into finished product, and how to produce and store high- vs. low-velocity SKUs.

Recently, Sunsweet added labor management to its production mix.

"In the past, we imposed layoffs, then paid workers overtime during peak periods," Treese says. "*Zemeter* creates a smooth production plan that boosts inventory levels but controls labor costs."

The company also shares real-time data with suppliers. As it oversells or undersells compared to forecast, it can adjust future production and therefore demand for packaging and other supplies.

"The business environment has changed dramatically," says Treese. But the grower is weathering shifting demands through the use of more nimble planning processes.




Given the variability of crop yields, Sunsweet relies on sales and operations planning software to forecast and plan inventory needs and ensure production remains fluid.

- Use of 3PL consolidation centers
- Finding backhaul volumes
- Using on-board computers to monitor truck operating efficiency. Food service companies are heavy users of onboard systems due to strict delivery windows and tight margins
- Investing in technologies to enhance inventory visibility and supply chain assets
- Implementing voice communication solutions to streamline warehouse operations
- Increasing the use of forward distribution, managed by 3PLs
- Rethinking the supply chain through network optimization tools and services

Sampling New Ways of Thinking

"Companies are increasingly receptive to examining their supply chain networks, and trying new and different strategies to change them," says Peter Westermann, president of Total Logistic Control, a Zeeland, Mich., 3PL active in food and beverage operations.

Food 3PLs Ready to Serve You

AFN (Advantage Freight Network)
Deerfield, Ill.
www.afnww.com

AmeriCold Logistics
Atlanta, Ga.
www.americold.net

ArrowStream
Chicago, Ill.
www.arrowstream.com

Evans Distribution Systems
Melvindale, Mich.
www.evansdist.com

FAC Food Service Logistics
Rocky Mount, NC
www.faclogistics.com

Jacobson Companies
Des Moines, Iowa
www.jacobsonco.com

Ruan
Des Moines, Iowa
www.ruan.com

Saddle Creek Corporation
Lakeland, Fla.
www.saddlecrk.com

TLC-Total Logistic Control
Zeeland, Mich.
www.totallogistic.com

Verst Group
Walton, Ky.
www.verstgroup.com

Weber Distribution
Santa Fe Springs, Calif.
www.weberdistribution.com

WOW Logistics
Appleton, Wisc.
www.wowlogistics.com

But the admirable goals of boosting efficiency and trimming costs must be balanced against customer demands, which sometimes hurt the cause. It isn't easy to satisfy retailers' desire for smaller, more frequent orders, for example, while consolidating shipments into full truckloads.

"One of our cost-cutting projects is to analyze our warehouse locations and make sure they're where they need to be. With correctly-sited facilities, we can combine more orders into one truckload, with less travel," says Bryce Treese, director of supply chain for Sunsweet.

Balancing sales and marketing needs with logistics is an ongoing challenge, he adds.

Some food companies may require larger order sizes, or move to longer production runs to minimize changeover time, storing more product as a result, says WOW's Schlapman.

Collaboration is also on the rise as a logistics cost-cutting strategy. Food companies are approaching suppliers and third-party logistics providers to attack shared issues together. Collaborating on forecasts with growers, for example, helps avoid the whipsaw effect that poor prune or apricot crops might have on processors.

"In agriculture, you don't always know how much product you will have to sell," says Tom Leonarski, senior consultant, food processing, for Supply Chain Consultants, a supply chain software developer in Wilmington, Del. Forecasting and planning technologies are key, he says, as are close supplier relationships.

"Historically, 3PLs have been do-ers, not necessarily thinkers," adds Westermann. "Today, however, food companies turn to 3PLs for their ability to help solve supply chain issues." Rather than demand lower rates, companies are starting to ask 3PLs to work with them to help reduce costs.

High raw material and fuel costs and "green" mandates haven't replaced other challenges filling food supply chain managers' plates. Consumers still expect a steady stream of new products. That leaves logistics departments to cope with the warehousing and transport challenges of SKU proliferation–another variable to consider as food companies rethink how and where they source, produce, and distribute their products.

SNAPSHOT
FOOD

Eating Away at Infrastructure

Truck driver shortages, paired with the government's failure to fully invest in highway infrastructure improvements, continue to impact the ability to move food quickly and economically.

One solution is to craft a long-term plan to rebuild highway infrastructure and reduce congestion, including unclogging critical highway freight bottlenecks, according to the American Trucking Associations.

"While China has invested considerable funds in its infrastructure, many of its vessels will be calling at U.S. ports, which have inadequate landside infrastructure to handle the crush of containers," Ray Kuntz, chairman of the American Trucking Associations, told a Senate subcommittee last April.

In fact, the United States' logistics system ranks 14th in the world based on key measures such as the quality of transportation infrastructure, competence of logistics providers, and terminal handling efficiency, according to a World Bank analysis.

Complexity Stays on the Menu

Food remains one of the few industries still dominated by domestic production. But the proximity of sources to end consumers doesn't make supply chain challenges any less complex.

Rising costs, fuel and infrastructure concerns, variable weather conditions and demand, and stepped-up scrutiny of safety and sustainability practices are forcing food supply chain executives to be more creative in trimming costs while ensuring quality.

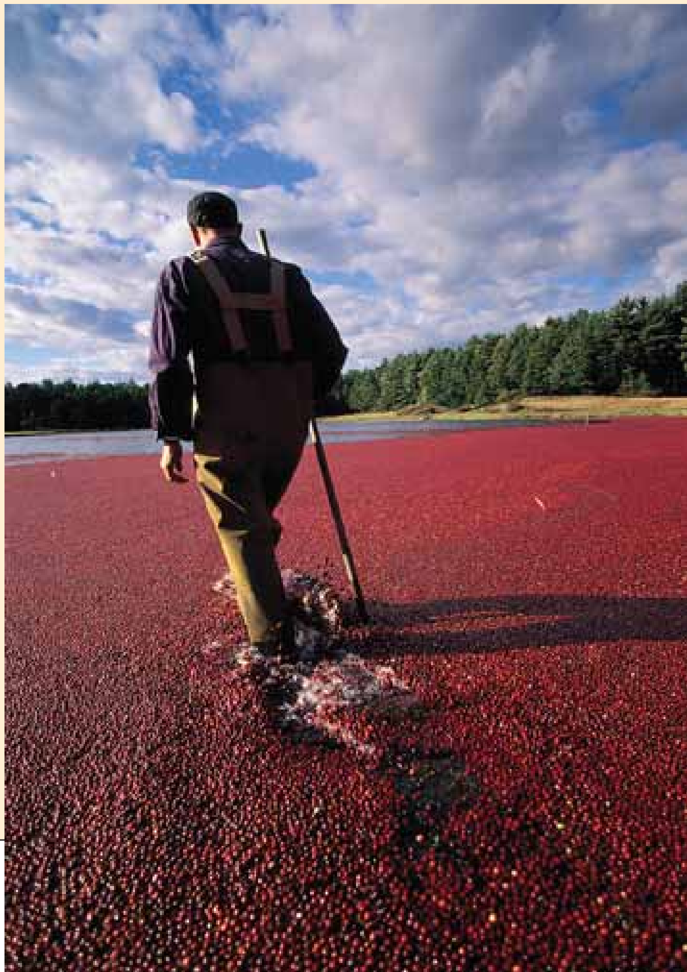
[CASE STUDY]

Ocean Spray: Moving From Bog to Bottle

Harvesting cranberries is a unique process. Workers flood their marshy growing fields, causing the cranberries, which have air pockets inside, to float to the top for easy removal from the vine.

Moving cranberries through the supply chain is also a unique process. Just ask Ocean Spray Cranberries, a cooperative owned by more than 650 cranberry and grapefruit growers. North America's leading producer of canned and bottled juices and juice drinks, Ocean Spray also makes Craisins, sweetened dried cranberries, and cranberry sauce.

Ocean Spray increasingly leverages total delivered cost metrics to define effective sourcing strategies, consider where and when to position finished goods inventory, and better manage its transportation. Using a proprietary tool from Eden Prairie, Minn.-based third party logistics provider C.H. Robinson's transportation management system, the cooperative can calculate the total delivered cost



BULKING UP. **As part of its move toward using more economical, earth-friendly bulk solutions, Ocean Spray turned to Ruan to provide over-the-road tanker services and bulk transportation from strategic U.S. locations.**

of finished goods. Now it's beginning to apply the technology to inbound raw material movements.

"Without a track-and-trace tool, it was hard to get inbound visibility. We were working off assumptions," says Doug Ward, inbound transportation manager for Ocean Spray. "Now that we use the software, however, we know the actual cost per unit to move raw material, and the plants can go online to locate their shipments."

Such analysis led Ocean Spray to consider bulk transportation to move raw materials used to make many of its products.

Much of the fruit Ocean Spray's cooperative farmers grow first moves by dry or refrigerated van to conversion facilities, where it's made into liquid concentrate for delivery to manufacturing sites across the country. Other purchased ingredients are also in a concentrate state. In the past, these materials were often shipped in steel drums or wooden bins. Now, however, Ocean Spray is moving away from transporting concentrate in bins and drums and moving toward bulk solutions – a more economic, earth-friendly strategy.

For example, each wooden bin currently used to move liquid concentrate weighs up to 300 pounds – even before the liquid is added. Ocean Spray is looking to move to isotankers or 20-foot "flexi" containers – basically a giant bag in a 20-foot shell – that can hold up to 4,900 gallons. These bulk containers use far less packaging per gallon of concentrate, optimizing cargo efficiency.

Embracing a bulk-only approach presents some obstacles. First, regulations hinder transport of bulk liquid food across state lines in the required vehicles. Second, the large tanks can't be stored in a typical cold warehouse. Instead, they require bulk holding farms for food-grade liquids near manufacturing plants, which are in short supply. Ocean Spray relies on Des Moines-based Ruan to provide over-the-road tanker services and support its bulk initiative from strategic locations inside the United States.

Leveraging bulk transportation within these constraints continues to challenge Doug Ward and his colleagues. Fortunately, the corporate culture at Ocean Spray encourages a collaborative approach.

"Ocean Spray's transportation people work closely with quality assurance and procurement," Ward says. "The three departments are joined at the hip. We don't just consider how much money we can save. We also look for the most practical way to get materials to the factories without compromising food safety."

Ocean Spray is now applying that same collaborative approach to working with upstream suppliers – particularly globally. Together they are working to increase total supply chain visibility, safety standards, and cost savings.

SNAPSHOT

FOOD

CASE STUDY

Logistics is Like a Box of Chocolates...

These days, even chocolates are fashionable.

Demand for freshness and variety has pervaded many consumer products categories, including fine chocolate. That makes life increasingly challenging for small companies such as Chocolate Potpourri, Glenview, Ill., which makes and sells high-end

chocolates to hospitality and retail customers. The company must continually develop and market new products while making sensible sourcing, production, and inventory choices.

With cocoa prices at a 28-year high, and sharp cost increases for ingredients, the 27-year-old manufacturer of *Veritas* and *How Sweet It Is* private label truffles and sweets must ensure that it attains maximum supply chain efficiencies. The company, which manufacturers about 80 percent made-to-stock product and 20 percent made-to-order, must also accommodate seasonality not only in sales, but in shipping conditions. Chocolate that's safe to move through standard less-than-truckload or parcel shipping channels in winter, for example, often needs extra coolpacks in the summer heat. The company prefers to under-produce rather than over-produce during the summer months due to shelf-life issues.

Chocolate Potpourri is taking a bite out of the challenge by leveraging a real-time forecasting, inventory management, and planning module from Costa Mesa, Calif.-based Syspro's enterprise resource planning system. The company took about one month to configure and load three years of sales history into the new system.

The tool checks raw materials inventory for made-to-order products, and notifies the staff whether supply is sufficient, or they need to order additional materials. By contrast, forecasts, rather than customer orders, drive production decisions for made-to-stock items.

"The solution lets us create an accurate forecast using sophisticated algorithms," says Richard Gordon, president of the chocolate maker.

Accurate forecasting also helps Chocolate Potpourri avoid waste by ensuring a just-right flow of inbound materials and outbound product. Consequently, the company has cut planning time from hours to minutes.

The software deployment has also allowed the company to implement more efficient shipping practices – for instance, holding a product for an extra day so an order can ship complete.

As chocolates grow more trendy, Chocolate Potpourri is now better prepared to handle the changes forced on production and logistics operations. When a new item is introduced, the staff creates a forecast by proxy – using the history of a previous product with a similar profile to project likely demand among customers.

AriZona Iced Tea: Brewing Up New Supply Chain Solutions

It made an unmistakable impact when it first appeared on store shelves in 1992: a tall, aluminum can, wrapped completely in an eye-catching, southwestern design. Soon, the company added glass bottles, with labels sporting the same award-winning graphics. Within 15 years, AriZona Iced Tea would become the top-selling ready-to-drink tea in the United States.

But those tall, glass bottles that helped make AriZona iced tea a hit have lost some of their appeal now that diesel costs more than $4 a gallon. In response, AriZona, which already offers multi-serve bottles made of Polyethylene Terephthalate (PET), has unveiled a single-serve version. Retailers are responding enthusiastically because a truck filled with PET bottles fits up to 14 percent more cases per load.

"Buyers are extremely pleased with the PET bottles because they weigh less than glass and are non-breakable," says Jay Petragnani, vice president of planning for AriZona Beverage, Cincinnati, Ohio, which also makes energy, fruit, and smoothie drinks.

AriZona's manufacturing and distribution executives are grappling with how popular PET bottles will become, and how to balance retailers' interest in PET single-serve packaging with other iterations of AriZona product. One challenge is the fact that only some of the manufacturer's 28 plants can produce the single-serve PET bottles – and adding that capability involves considerable investment. Couple that with the comparative costs of shipping full pallets vs. mixed orders, and it's a conundrum not many software applications are capable of solving.

"It's a challenge to fulfill a customer's mixed order, and deliver efficiently and effectively," says Petragnani.

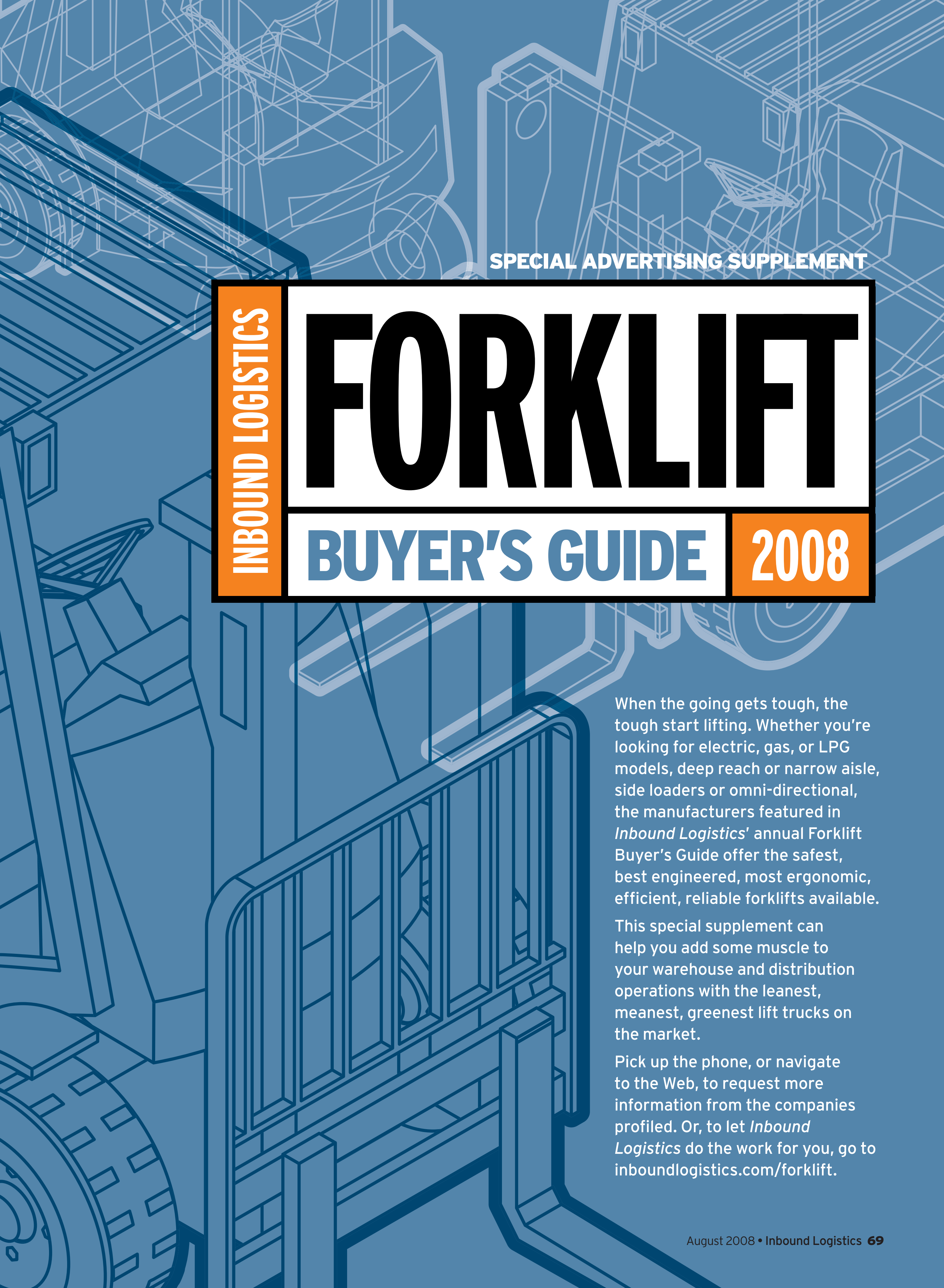
And then there are the intangibles: how much does the consumer perceive glass contributes to the taste and enjoyment of the product?

Tea-chers PET

AriZona isn't relying on PET alone to solve all its logistics challenges. The company is also cross-docking finished goods to accommodate growing product volume in Florida. After successfully transhipping product at a company-owned facility in New York, AriZona chose to outsource cross-docking in its Florida plant to a third-party logistics provider: Saddle Creek Corp., Lakeland, Fla. After using Saddle Creek in an initial test, AriZona expanded its use of the 3PL. By next year, Saddle Creek will handle complete finished goods cross-docking for AriZona's Florida plant.

Saddle Creek picks up full truckloads of finished goods at AriZona plants in Tampa and Ft. Meyers and transports them to its own facility. There, the goods are cross-docked for local direct-store delivery by distributors.

"This helped direct-store deliveries immensely," says Petragnani.



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TCM 866-216-7840 www.tcmusa.com

TCM PRO Class 5 Pneumatic Lift Truck

CAPACITY: 3,000 to 6,000 lbs.

POWER SOURCE: Internal combustion, LPG, gas, and diesel

OVERALL LENGTH: 88.4" to 106.5"

OVERALL WIDTH: 42.1" to 48.2"

OVERALL HEIGHT (FORKS LOWERED): 81.5" to 82.5"

APPLICATION/ENVIRONMENT: Ideal for heavy-duty use on multiple surfaces, including gravel.

The TCM PRO Class 5 pneumatic lift truck's design incorporates more than 58 years of materials handling innovation and experience. Every aspect of these 100-percent clean-sheet pneumatic fork trucks was evaluated and optimized for reliability, power, and productivity. The Tier 3 compliant engines are fuel efficient and produce very low emissions, while running cooler due to an improved engine compartment airflow. The automatic transmission has cast iron cases; bigger shafts, gears, and torque converters; and clutch packs for reliability and quiet operation.

▶ TCM PRO-CB 4 Wheel Electric Lift Truck

CAPACITY: 3,000 to 6,000 lbs.

POWER SOURCE: Electric

OVERALL LENGTH: 118.3" to 129.9"

OVERALL WIDTH: 37.8" to 43.5"

OVERALL HEIGHT (FORKS LOWERED): 85"

APPLICATION/ENVIRONMENT: Designed for close-quarters load handling in warehouses and trailers.

These 100-percent AC-powered lift trucks are clean-sheet, with features to increase their operating efficiency and productivity. The AC motors replenish the battery during braking, or whenever travel direction is reversed, to deliver eight hours run time on a single charge. The truck's state-of-the-art controller manages operating current draw and power regeneration. The four controller settings–travel speed, tilting speed, attachment speed, and power output–can all be adjusted. The lift truck's instrument panel carries on-board self diagnostics to simplify troubleshooting and maintenance at the job location without handheld meters.

TCM PRO Class 4 Cushion Tire Lift Truck

CAPACITY: 3,000 to 6,000 lbs.

POWER SOURCE: Internal combustion, LPG, gas, and diesel

OVERALL LENGTH: 83.9" to 96.9"

OVERALL WIDTH: 38" to 43.5"

OVERALL HEIGHT (FORKS LOWERED): 83.1"

APPLICATION/ENVIRONMENT: Designed for close-quarters load handling in warehouses and trailers.

TCM's 100-percent clean-sheet cushion tire fork truck comes standard with Tier 3 compliant engines, TCM-designed and built automatic transmissions, and TCM-designed and built masts. Operator comfort has improved with wider floors and steps to make entering and exiting the vehicle easy. Safety has also improved, with a restraint system built into the operator seat; a complete system of interlocks including a weight-sensing driver's seat, neutral safety, tilt cylinder lock, and parking brake alarm; and high-mount brake lights with vibration-resistant bulbs.

Landoll

800-428-5655
www.landoll.com/mhp

Bendi Electric Series

CAPACITY: 3,000 lbs. to 4,500 lbs.

POWER SOURCE: Electric

FREE LIFT: 56″ to 161″

MAXIMUM FORK HEIGHT: 433″

LOWERED HEIGHT: 92″ to 185″

APPLICATION: Designed with a narrow mast and compact front end for easy stacking in narrow aisles.

The Bendi Electric Narrow Aisle trucks are available with three-stage tilting masts. Quad masts also are available to 26 feet, which gives the Bendi high stacking ability, while allowing the low mast height necessary to work in highway trailers or travel through low doorways.

Bendi IC

CAPACITY: 4,000 lbs.

POWER SOURCE: LPG

FREE LIFT: 61″ to 82″

MAXIMUM FORK HEIGHT: 312″

LOWERED HEIGHT: 83″ to 107″

APPLICATION: For use in a range of settings, including loading docks, inside trailers, and warehouses, and especially suited to navigating narrow aisles.

This narrow aisle forklift features a GM 2.4L internal combustion engine designed specifically for LP gas. Refilling or removing and replacing the rear-mounted LP tank is easy, fast, and safe. The 2.4-liter four-cylinder engine is easily accessible under the insulated seat base. The engine is rated at 67 hp at 2400 rpm, and meets or exceeds emission standards for its vehicle class in all 50 states.

Drexel SwingMast Series

CAPACITY: 3,000 lbs. to 12,000 lbs.

POWER SOURCE: Electric, LP gas, or diesel

FREE LIFT: 42″ to 99″

MAXIMUM FORK HEIGHT: 135″ to 269″

LOWERED HEIGHT: 82″ to 124″

APPLICATION: Can be used in aisles as narrow as 56 inches; suitable for a range of settings.

The Drexel SwingMast series design enables drivers to turn only the mast assembly, not the entire truck. The versatile Drexel SwingMast series gives you four trucks in one, performing like a conventional counterbalanced truck, a reach truck, a sideloader, and a turret truck.

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Tusk

800-980-TUSK
www.tusklifttrucks.com

▶ Model CX20/CX50/DX20/DX50/EX50

CAPACITY: 8,000 to 35,000 lbs.

POWER SOURCE: Gas, LPG, diesel

FREE LIFT: Up to 85"

LENGTH TO FORK FACE: 95.9" to 189"

WIDTH: 48.0" to 97.6"

HEIGHT (FORKS LOWERED): 86.2" to 196.5"

APPLICATION / ENVIRONMENT: Indoors and outdoors in a wide variety of warehousing, dock, plant, ship, and railyard applications.

When it comes to large-capacity forklifts, Tusk has a complete range to meet any application need. Models feature dual floating operator compartments for increased operator comfort, rugged and durable designs for dependability, and new and technologically advanced diesel engines that meet power needs while reducing fuel consumption and operating costs.

Model BBX50 Series

CAPACITY: 4,000 to 6,500 lbs.

POWER SOURCE: Electric

FREE LIFT: 5.5" to 52.5"

LENGTH TO FORK FACE: 80.5" to 89.8"

WIDTH: 41.7" to 43.3"

HEIGHT (FORKS LOWERED): 86.6" to 100.5"

APPLICATION / ENVIRONMENT: Indoors on improved surfaces in a variety of warehousing, dock, and manufacturing environments.

With Total AC technology, the BBX50 series has AC drive, hydraulics, and controlled power steering. The BBX50 also features a multi-purpose display and programming panel, along with several new operator compartment improvements for improved operator comfort, efficiency, and productivity.

▼ Model AX50/BX50 Series

CAPACITY: 3,000 to 7,000 lbs.

POWER SOURCE: Gas, LPG, and diesel

FREE LIFT: 5.5" to 62.5"

LENGTH TO FORK FACE: 79.7" to 110"

WIDTH: 38.2" to 50.8"

HEIGHT (FORKS LOWERED): 80.3" to 110.5"

APPLICATION / ENVIRONMENT: Indoors or outdoors in a wide variety of warehousing, dock, and manufacturing environments.

The AX50/BX50 series lift trucks are available in cushion and pneumatic tire models and feature a high-visibility UltraVizion mast, on-demand hydrostatic power steering, a dual-floating operator compartment for greatly reduced vibration levels, easy serviceability, and reduced maintenance requirements.

Doosan

800-323-9662
www.doosanlift.com

Model D160

CAPACITY: 36,000 lbs.

POWER SOURCE: Diesel

MAXIMUM FORK HEIGHT: 177"

LOWERED HEIGHT: 155"

TRUCK LENGTH: 185.6"

TRUCK WIDTH: 98"

TRUCK HEIGHT: 115.2"

APPLICATION: Suited for heavy-duty use on multiple surfaces.

Doosan's D160 features an EPA compliant turbo-cooled low emission 5.9-liter Doosan diesel engine with 158 hp rating for high performance. A fully electric controlled autoshift transmission provides electronic inching, enabling even massive loads to be moved with great precision. A planetary drive axle with four-pinion, hypoid differential provides protection against high-impact shock loading.

Model G30E

CAPACITY: 6,000 lbs.

POWER SOURCE: LPG

FREE LIFT: 59"

MAXIMUM FORK HEIGHT: 186"

LOWERED HEIGHT: 85"

TRUCK LENGTH: 106"

TRUCK WIDTH: 47.1"

TRUCK HEIGHT: 86"

APPLICATION: Ideal for use over extended periods, thanks to operator comfort features.

Doosan's G30E features EPA-compliant low emission engines, an aluminum radiator with high cooling capacity and air flow, and fully enclosed oil disc brakes that eliminate contamination and come with an industry exclusive five-year/10,000-hour warranty. A deluxe suspension seat, tilt steering, and seat-deck mounted hydraulic levers enhance operator comfort.

Model BC32S

CAPACITY: 6,500 lbs.

POWER SOURCE: Electric

FREE LIFT: 63"

MAXIMUM FORK HEIGHT: 186"

LOWERED HEIGHT: 83"

TRUCK LENGTH: 90.7"

TRUCK WIDTH: 43.7"

TRUCK HEIGHT: 87"

APPLICATION: Designed for maneuvering heavier loads in tight operating conditions such as warehouses and trailers.

Doosan's BC32S with innovative AC control of both drive and hydraulic motors eliminates motor brushes, commutators, and directional contactors, reducing maintenance costs. The standard Active Control Technology feature allows the operator to select the performance mode that best matches application requirements.

Datamax

407-578-8007
www.datamaxcorp.com

▶ Compact4 Mobile

HEIGHT: 4.1″

WIDTH: 9.1″

DEPTH: 10.2″

WEIGHT: 9.9 lbs.

PRINT RESOLUTION: 200 or 300 dpi

PRINT WIDTH: Up to 4.1″

PRINT SPEED: Up to 4.9″ per second

Designed for installation on forklift trucks and mobile stations, the Compact4 Mobile operates from a connection to a forklift's battery. Its vibration-proof design makes it the perfect choice for warehousing logistics.

▲ Compact4

HEIGHT: 4.1 inches

WIDTH: 9.1″

DEPTH: 10.2″

WEIGHT: 7.7 lbs.

PRINT RESOLUTION: 200 or 300 dpi

PRINT WIDTH: Up to 4.1″

PRINT SPEED: Up to 4.9″ per second

The Compact4 is a powerful response to desktop thermal printing requirements and ideal for on-demand printing, especially where space is limited. Able to deliver continuous operation, the Compact4 is the printer of choice whenever ease of use, reliability, and high performance are a must.

▼ Nova

HEIGHT: 5.9″ to 8.3″

WIDTH: 9.1″ to 13.5″

DEPTH: 14.2″

WEIGHT: 12.8 lbs. to 18.1 lbs.

PRINT RESOLUTION: Up to 300 dpi

PRINT WIDTH: 4.1″ to 8.5″

PRINT SPEED: 6″ per second to 10″ per second

The Nova series is for customers who need high-speed, high-capacity label rolls, reliability, and ease of use. These printers are the most compact printers in their class. Featuring all-metal casing, they are tough enough for harsh industrial environments, yet quiet enough for office use.

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DCSOLUTIONS

By Amanda Loudin

Put-to-Light Loves lucy

A new put-to-light system keeps women's activewear provider lucy on the go.

As more women adopt healthy, active lifestyles, demand is growing for stylish, comfortable clothing that allows them to move easily from the gym, to the store, to home. One company that is meeting that demand is lucy activewear.

Founded in 1999, lucy sells flattering, performance-based activewear, including shirts, pants, jackets, and related accessories. A wholly owned subsidiary of VF Corporation, lucy's 2007 sales reached $57 million.

The company sells its line of lucy-label apparel and exclusive designs from other brands in its 63 stores in 16 states and through its Web site.

lucy is meeting the needs of a growing niche. Its products have become so popular, in fact, that it opened 30 new retail stores in 24 months. While the expansion is welcome, it also creates growing pains: the challenge of efficiently stocking existing stores while adding new ones.

Two years ago, during this period of growth, the company operated without a warehouse management system and used a manual, paper-based picking process in its 40,000-square-foot distribution center in Portland, Ore. If lucy was to keep up with its rapid growth, automation was in order.

"We wanted to invest in marketing our product rather than in DC infrastructure," says Barbara Bones, director of distribution and fulfillment. "At the same time, we needed a way to fulfill orders in a larger number of stores."

Under the old process, pickers armed with paper pick lists pulled each store's entire order and brought it to a pack station. There was a small, 100-foot conveyor system between the pack area and the ship station, but no sortation equipment.

With 2,000 to 3,000 SKUs in 30 stores, the manual system required a lot of labor to handle replenishment, as well as process new goods as they came into the DC. "That labor-intensive system was maxing us out," says Bones.

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"Getting senior management to recognize the efficiencies that can be gained through automation is a big win. We can generate more interest in our operational proposals if we can show a favorable ROI."

– **Barbara Bones,** director of distribution and fulfillment, lucy

The company wanted a system that allowed it to pick in waves. About 80 percent of lucy's products are cross-docked through the DC for shipment to its stores. The remaining 20 percent of products are either new or continuously replenished items handled through the pick system. lucy determined that a put-to-light system would improve production speed and accuracy.

For lucy, choosing the right vendor–in this case, Grand Rapids, Mich.-based Dematic–was not a difficult choice. "Our vice president of logistics at the time had experience working with Dematic on previous projects," says Bones. "He was familiar with the company's software and equipment and believed it would be a good fit for us."

"lucy approached us because it wanted to avoid the expense of adding labor as store counts grew," says Dematic's Aaron Marks.

Dematic set to work with lucy to determine what type of system it needed. "lucy wanted a paperless order fulfillment system," says Marks. "We worked out processes that would streamline operations."

With the put-to-light system selected, the next step was implementing Dematic's PickDirector software. "PickDirector software is middleware between our retail system and the put-to-light technology," says Bones. "Allocated orders are now uploaded into the Dematic system and converted to waves." Next up was installing the hardware.

BIG GAINS

The new system employs 160 lights; 80 are dedicated to putting new goods and 80 to putting replenishment goods. The majority of these goods are fashion items with an eight- to 12-week in-store lifespan. New goods are shipped twice

Barbara Bones (*above*), lucy's director of distribution and fulfillment, oversaw installation of the put-to-light system, which allows pickers to prepare shipments for lucy's 63 stores in waves.

monthly and replenished twice weekly.

"The system is currently hard-coded with one light per store on each side of the line," says Bones. "Once we open our 81st store, however, we will have to either extend the putting area or find another option. PickDirector is flexible, so we are exploring our options with Dematic's technical support team."

The put-to-light system was designed to allow for future capacity. "We came up with comfortable parameters that would allow lucy to be productive with the new system for at least three years before having to make changes," Marks explains.

The PickDirector software pulls and manipulates data from lucy's ERP system, enabling the DC to pick in waves. The flexible program can set up waves in a variety of combinations–by store location, by SKUs, or by DC zones. With PickDirector in place, lucy was able to delay implementing a WMS because inventory data from the ERP system is pushed directly into PickDirector.

The company used a proprietary program, lucy Ship, which associates the items being picked with the carton ID. lucy Ship creates a packing list for each outgoing box and emails advice to store managers about the products shipped.

NO PAIN, BIG GAINS

The new system has brought lucy dramatic gains: reduced labor requirements, even while the business grows; reduced time from writing an order to picking and shipping; and a full-day shorter average throughput for order processing.

"We've been able to improve pick processing by 400 percent," says Bones. "And we have improved putting speed by at least 100 percent.

"Getting senior management to recognize the efficiencies that can be gained through automation is a big win. We can generate more interest in our operational proposals if we can show a favorable ROI," Bones says.

Such support may lead to additional automation in the future.

The lucy application proved unique in that it didn't involve a WMS. "PickDirector handles orders without a WMS, allowing lucy to avoid the cost and time involved in implementing one," says Marks.

lucy has proven that big gains don't require huge investments in automation. With the simple addition of an automated put-to-light system, the company has become an exercise in productivity gains. And for athletic women, it all works out. ■

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L.I.T. TOOLKIT

by Dan Calabrese

Sherwin-Williams' private fleet integrates its dispatch system with PeopleNet to brush up on efficiency.

Painting a Picture Of Private Fleet Profit

Many private fleets struggle to balance the primary mission of serving the corporate owner with the ideal of becoming a self-supporting profit center.

Such was the case with Sherwin-Williams, the largest producer of paints and coatings in the United States. Founded in 1866, and based in Cleveland, the company reports annual sales of $7.8 billion. Since 1982, it has operated its own private fleet for product distribution to 3,000-plus company-owned stores.

The Sherwin-Williams fleet regularly leases approximately 350 trucks, and escalates to as many as 450 trucks during peak activity periods.

During a 2005 assessment of its dispatch system, the company determined that it was strong on internal matters, but needed to better meet its broader asset-utilization goals.

Sherwin-Williams began that effort by searching for a dispatch system that would be compatible with its recently implemented Global Positioning System (GPS) from mobile communications and onboard computing provider PeopleNet, based in Chaska, Minn.

"Our goal was to improve asset utilization and reduce empty miles," recalls Rick Ashton, Sherwin-Williams director of transportation. "We were looking for software that would interface and interact with the PeopleNet units."

SYSTEM OF CHOICE

Sherwin-Williams eventually chose a dispatch system designed by TMW Systems, a Cleveland-based enterprise management software company that serves the trucking industry exclusively.

CONTINUED FROM PAGE 85

> **“Many people poured a lot of hard work and stress into making the system work. Now we’re starting to see the payoff.”**
>
> – Rich Ashton,
> director of transportation,
> Sherwin-Williams

The implementation’s success depended on its ability to reduce deadhead miles and improve overall performance, according to David Mook, chief operating officer of TMW Systems.

“Private fleets tend to approach dispatch systems from a supply chain standpoint,” Mook says. “While they are sensitive to maintaining logs and monitoring drivers’ time, they aren’t typically focused on optimizing asset utilization. Compared to commercial carriers, private fleets tend to run more deadhead miles and use assets less efficiently.

“Some systems designed for private fleets are good at measuring landed costs, but fall short when identifying backhaul opportunities and streamlining overall transportation costs,” Mook adds. The TMW system’s goal is to help private fleets run as profitably as for-hire fleets.

GRATEFUL DEADHEAD

The TMW dispatch system meets that goal for Sherwin-Williams by helping integrate the company’s pursuit of backhaul opportunities with information already in the system.

“The system readily identifies lanes that we run,” Ashton explains. “We service our stores on a regular schedule every week, so we build consistency in those runs. But the system also lets us pinpoint where we’re running non-revenue lanes–empty miles–and focus on trying to fill them.”

To achieve this goal, Sherwin-Williams empowers its internal sales team to sell backhaul miles. “We deliver to our stores, then try to sell backhauls from where those trucks terminate,” Ashton says. “We’ll travel a reasonable distance to get the backhaul.”

Designing the dispatch system to help private fleets identify and quickly take advantage of backhaul opportunities was simple, according to Mook.

“It’s like playing let’s-make-a-match,” he explains. “The system can analyze multiple loads and drivers with different starting points, and calculate the optimal connections.”

The TMW dispatch system logs nearby companies that have used Sherwin-Williams for backhaul services in the past, and serves them up when the company is searching to fill empty miles. By using a variety of tools, filters, and views, the system narrows down likely opportunities.

“Assigning backhauls to drivers is a balancing act, trying to ensure all drivers are getting their miles,” Mook notes. “It doesn’t make sense for one driver to get 3,000 miles a week and another only 1,000 miles a week.”

By taking such factors into account, the system not only reduces empty miles but also helps Sherwin-Williams better balance driver payroll against the use of driver hours.

At the same time, Ashton says, the new system automates the collection of information–making logs more reliable and easier for drivers to administer. The changes were initially disconcerting to some drivers, but have since proven beneficial.

“We were able to automate driver payroll,” Ashton says. “Instead of drivers spending hours every week manually entering all their stops on trip sheets for payroll purposes, we now capture driver information through the PeopleNet unit in conjunction with TMW, and use it to calculate their pay.”

DISPATCHING MADE EASY

The process of delivering paint to Sherwin-Williams stores and other distributors has also been made more efficient by the use of tools that simplify tasks for dispatchers.

“By using the TMW system in conjunction with PeopleNet, we are able to improve how we communicate with our trucks,” Ashton says. “Display units have been installed in each truck, enabling us to dispatch and communicate directly with the drivers without having to use cell phones or other devices.”

These tools will only grow in importance as companies expect more of their private fleets, according to Mook.

"The slippery slope of private fleets is that once you start moving longer hauls, you need more sophisticated technology to manage them," he says. "While it's easy to think of transportation as a straight line between inbound and outbound, in reality it's often a triangle or polygon."

DOLLARS AND SENSE

To help shippers use their enterprise systems to enhance value and make more effective decisions, TMW has added tools such as an overall optimization kit that includes fuel calculations.

"Enterprise tools can help determine if taking a load makes sense," Mook says. "For example, a fleet gets $8 a mile to make a run, which is a good rate, but leaves the driver off in Orlando, Fla., and he's stuck deadheading out of there. Sometimes taking a load makes sense, but sometimes it doesn't. Enterprise tools provide the means to make more efficient decisions."

By using interfaces with its regular order management system, Sherwin-Williams has improved its dispatcher-to-driver ratio. Because most of the fleet's activity is within the company–shipping paint to 3,200 company-owned stores–this interface is easy to establish and utilize.

The system also anticipates drivers' availability and matches them with anticipated delivery needs–a function tailor-made for private fleets.

"It allows us to pre-schedule driver trips, so we can load in two or three different runs," Ashton says. "As soon as the next trip comes up, the driver is ready to go."

Having posted solid results from its utilization of the system to date, Sherwin-Williams is now looking at ways to apply it to other needs.

"We're implementing the same system to do our fuel-tax calculations," Ashton says. "We're currently capturing all that information, so drivers can be less concerned about it."

PATIENCE PAYS OFF

While the full return on investment in the dispatch system was not instantaneous, Ashton's team is now seeing the results they had hoped would justify the implementation.

"A lot of people have invested work in the system, and endured a lot of stress during the last three years," Ashton says. "And now we're starting to see the payoff. The practical implications are in place, and we're working on utilizing the information we have readily available to us to manage our fleets more effectively." ■

TECHUPDATE

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www.confidex.net ✆ 919-349-5607

software

DHL

WHAT'S NEW: An update of the *EasyShip Connect* shipping solution.

THE VALUE: Shippers connect with DHL to perform all shipping functions, from printing waybills to tracking shipments to viewing shipment management reports. Also, exporters can use the application to submit a pre-filed Internal Transaction Number for compliance with U.S. Department of Commerce Electronic Export Information requirements.

www.dhl-usa.com ✆ 800-CALL-DHL

Kewill

WHAT'S NEW: Enhancements to *Export Compliance System* (*ECS*).

THE VALUE: The new version of *ECS* allows users to strengthen their compliance with expanded options such as real-time order and reverse-denied party screening; consolidated lists of people, groups, and entities subject to European Union financial sanctions; and more powerful integration modules.

www.kewill.com ✆ 508-357-6470

Motorola

WHAT'S NEW: The availability of *Mobility Services Platform* (*MSP*) 3.2.

THE VALUE: *MSP* 3.2 offers enhanced management capabilities to maximize enterprise mobile device uptime and

Zebra Technologies

WHAT'S NEW: A line of thermal desktop printers.

THE VALUE: Offering wireless connectivity and a combination of direct thermal/thermal transfer versions, Zebra's compact G series printers are suitable for printing shipping and return labels, receipts, and tags.

www.zebra.com

✆ 847-634-6700

CONTINUED FROM PAGE 89

Intelligent Global Pooling Systems (iGPS)

WHAT'S NEW: Collection and sorting locations for RFID-tagged pallets.

THE VALUE: Pallet receivers who accept designation as iDepots sort and inspect iGPS pallets and prepare them for pick-up and shipment to other users, earning a per-pallet handling and inspection fee from iGPS. The program eliminates return fees, transport time to inspection facilities, and greenhouse gases created during transport for inspection.

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RedTail Solutions

WHAT'S NEW: An enhanced interface for its EDI solution.

THE VALUE: Designed to work with *AccountMate* accounting software, RedTail's managed services solution handles all communications between trading partners and manufacturers and distributors, integrating with *AccountMate* through its transaction management application.

www.redtailsolutions.com ✆ 866-764-7601

Railcar Management System (RMS)

WHAT'S NEW: The *RMS Report Framework* report-building application.

THE VALUE: Shippers can create datasets to gather rail shipment and fleet data, then compile it into customized reports. *RMS Report Framework* offers new layouts and ways to display the data using a combination of fields, field name aliases, field sizing, summarizing, grouping, sorting, filtering, output file formatting, and automatic e-mail delivery options.

www.railcartracking.com ✆ 314-667-5791

Transportation | Warehouse Optimization (TWO)

WHAT'S NEW: Shipment-origin locator software.

THE VALUE: *Automatic Ship Point Assignment* (*AutoSPA*) determines the least-expensive, capacity-constrained origin point for a shipment by analyzing possible alternatives, taking into account production costs and transfer points. *AutoSPA* can also use total net margin to determine the best ship point.

www.transportationoptimization.com
✆ 615-791-8000

Next Generation Logistics

WHAT'S NEW: A release of the *OptiNet Network Optimization* application.

THE VALUE: *OptiNet* links a modeling software tool with current transportation lane costs from the *FreightMaster TMS* to evaluate current, alternative, and "green field" network modeling scenarios.

www.nextgeneration.com ✆ 847-963-0007

Inttra

WHAT'S NEW: An update of *Idle Container Management* (*ICM*).

THE VALUE: *ICM* provides shippers visibility across multiple ocean carriers and issues exception alerts so potential problems can be resolved before they escalate.

www.inttra.com ✆ 973-263-5100

Management Dynamics Inc.

WHAT'S NEW: The launch of airfreight logistics automation software.

THE VALUE: *Air Rate Manager,* a module of Management Dynamics' *International Transportation Management* solution, enables shippers to manage

To learn more, contact these companies directly. Remember to mention this issue date and page to get the right information.

rates, resulting in more effective routing and carrier selections, and expediting the accurate audit of air waybills for improved productivity and reduced transportation spend.

www.managementdynamics.com
201-935-8588

Interactive Capacity Gateway (ICG)

WHAT'S NEW: Online access to ICG's shipment management software.
THE VALUE: The Web site enables shippers to create an online collaborative network to manage ground shipment activity from a Web site branded with their own identity. The software provides online order entry; online procurement; proactive event management; order visibility and tracking; and reporting tools.

www.interactivecapacitygateway.com
248-359-2119

web

FreightWatch International

WHAT'S NEW: The launch of a cargo security Web site.
THE VALUE: The Cargo Theft Intelligence Portal provides shippers the latest cargo theft data, analysis, and reports. A companion database allows shippers to search and enter cargo theft incident information.

www.freightwatchusa.com/intelligence_portal
877-225-6490

Intermodal Association of North America (IANA)

WHAT'S NEW: The addition of a motor carrier service mapping tool to its online directory.
THE VALUE: The Motor Carrier Service Directory allows users of IANA's North American Intermodal Terminal Directory to pinpoint specific terminals and identify supporting roadways. The free service provides detailed information on more than 200 IANA-member motor carriers offering drayage and highway services to and from intermodal rail facilities.

www.intermodal.org 301-982-3400

hardware

LXE Inc.

WHAT'S NEW: A Canadian service center.
THE VALUE: Located in Ottawa, the service center provides handheld-computer equipment repairs for LXE's customer base and partner network in the Canadian warehouse and logistics market.

www.lxe.com 770-447-4224

Tharo Systems

WHAT'S NEW: Two label printer series.
THE VALUE: The durable, all-metal H-400 and H-600 series product identification and bar-code label printers can be connected to a standard PC keyboard and used without a computer for increased portability.

www.tharo.com 800-878-6833

partnerships

OATSystems and Oracle

WHAT'S NEW: The addition of OATSystems' RFID capabilities to Oracle's applications.
THE VALUE: Oracle customers gain a new level of real-time visibility into Oracle's existing suite of supply chain and retail applications.

www.oatsystems.com 781-907-6100
www.oracle.com 800-633-0738

Prophesy and TransCore

WHAT'S NEW: Prophesy's *Dispatch* and *TrackerSeries* mobile communications solutions work with TransCore's GlobalWave satellite trailer-tracking device.
THE VALUE: GlobalWave hardware, which has a five- to seven-year battery life, attaches to the trailer's surface and exports GPS data to *Dispatch*, improving trailer activity visibility.

www.mile.com 800-776-6706
www.transcore.com 717-561-2400


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The TransComp Exhibition and Intermodal Expo are held in cooperation with NITL's 101st Annual Meeting, IANA's Annual Membership Meeting, and TIA's Fall Meeting.

NEWSERVICES

YOUR BUSINESS LOGISTICS RESOURCE

Lufthansa Cargo

WHAT'S NEW: The expansion of services to Brazil.

THE VALUE: Lufthansa Cargo doubled its weekly freight service from Frankfurt, Germany, to Curitiba, Brazil, with a Wednesday evening flight; previously, it made the trip on Saturday only. A World Airways Boeing 747-700 freighter serves the route.

www.lufthansa-cargo.com ✆ 800-542-2746

YRC Logistics

WHAT'S NEW: Brokerage services kiosks.

THE VALUE: Strategically located in seven United States/Canada border-crossing locations, the kiosks give drivers 24/7 access to YRC's Cross Border brokerage services, which reviews the shipping documentation and returns the required information to the driver for immediate customs processing.

www.yrclogistics.com ✆ 877-232-1845

UPS

WHAT'S NEW: The relocation of its intra-Asia air hub from the Philippines to Shenzhen, China.

THE VALUE: Based at the Shenzhen Airport near Hong Kong and opening in 2010, the relocated hub will reduce transit times across Asia by at least one day.

www.ups.com ✆ 800-PICK-UPS

JDF Distribution

WHAT'S NEW: A facility in northwest Houston.

THE VALUE: A 25-door, 75,000-square-foot warehouse facility brings JDF's total warehouse space in Texas to almost 500,000 square feet.

www.jdfdistribution.com ✆ 888-745-6494

Estes Express Lines

WHAT'S NEW: A terminal in Wausau, Wis.

THE VALUE: The new terminal provides expanded service coverage in the Upper Midwest.

www.estes-express.com ✆ 804-353-1900

Purolator USA

WHAT'S NEW: A regional processing facility in King of Prussia, Pa.

THE VALUE: The new facility serves businesses in Philadelphia, southern and central New Jersey, Maryland, Delaware, and Virginia that ship to Canada and within the United States.

www.purolatorusa.com ✆ 888-511-4811

Roadway

WHAT'S NEW: Full-service final-mile delivery.

THE VALUE: Through a partnership with residential and commercial delivery service provider NonstopDelivery,

NEWSERVICES

CONTINUED FROM PAGE 93

Port of Longview

WHAT'S NEW: A mobile harbor crane.

THE VALUE: Capable of lifting more than 110 tons, the Liebherr LHM500S crane handles the southwest Washington port's wind energy cargo, which accounts for more than 20 percent of its marine terminal business.

www.portoflongview.com
360-425-3305

Roadway offers specialized business-to-consumer solutions throughout the United States for online purchases, catalog sales, custom-ordered items, strip-mall deliveries, urban area storefronts, and fixture projects.

www.roadway.com 888-550-9800

Old Dominion Freight Line

WHAT'S NEW: The introduction of a warehouse service.

THE VALUE: Designed to help companies without in-house logistics services, the new division provides warehouse management system technology powered by SAP, and services such as pick-and-pack, replenishment, and labeling.

www.odfl.com 800-432-6335

APL Logistics and Con-way Freight

WHAT'S NEW: Day-definite container service from China to Canada.

THE VALUE: Shippers sourcing from Guangzhou, China, can ship less-than-containerload export cargo to Montreal, Toronto, and Vancouver using OceanGuaranteed service.

www.apllogistics.com or www.con-way.com
866-896-2005

Averitt

WHAT'S NEW: Less-than-containerload service from Asia.

THE VALUE: The Asia-Memphis Express delivers transit times up to 10 days faster than traditional LCL service. Cargo loaded in Asia is deconsolidated at Averitt's Memphis service center, then delivered to customers via Averitt's LTL distribution network.

www.averittexpress.com 800-AVERITT

Ivy Associates Limited

WHAT'S NEW: A shock-absorbing pillow.

THE VALUE: Installed in railcars, trailers, and sea containers, the Ivy Shock Pillow improves parts quality and reduces transit damage by absorbing impact shocks before they are transferred to the cargo.

www.ivyworld.net + 86 21 5877 7012

Evergreen Line

WHAT'S NEW: The launch of a Far East Panama service.

THE VALUE: Restructured from the existing China-U.S. East Coast service, the Far East Panama service brings expanded port coverage, greater capacity, and improved transit time.

www.evergreen-line.com

FKI Logistex

WHAT'S NEW: A Technology and Education Center.

To learn more, contact these companies directly. Remember to mention this issue date and page to get the right information.

THE VALUE: The 31,000-square-foot facility in Cincinnati, Ohio, combines classroom and hands-on experience to train maintenance and operations staff on the center's fully functional systems, which include automated sortation, conveying, AS/RS, order fulfillment, and software and controls.

www.fkilogistex.com **877-935-4564**

MHF Logistical Solutions Inc.

WHAT'S NEW: A supply chain solutions division.

THE VALUE: Based near Pittsburgh, Penn., the division provides complete logistics service through a single point of contact, handling rail, intermodal, truckload, less-than-truckload, air, international, transloading, and supply chain management.

www.mhfls.com **724-772-9800**

Cornerstone Automation System Inc.

WHAT'S NEW: Expansion of the SortMaster conveyor sorter and diverter line.

THE VALUE: The SortMaster 130 HS, a high-speed pusher/diverter, rejects cartons from roller and belted conveyors. It is suitable for applications needing more than 30 cartons per minute.

www.cornerstoneautosys.com **800-401-0304**

Grand Alliance

WHAT'S NEW: A ninth vessel.

THE VALUE: The 6,2000-TEU ship, serving the Grand Alliance's Japan/North Europe route, completes the alliance's environmentally friendly program goals, aimed at lowering emissions by 20 to 30 percent by adding vessels.

www.oocl.com **888-388-OOCL**

Transplace

WHAT'S NEW: The introduction of a supply chain improvement consulting group.

THE VALUE: Transplace Consulting, headquartered in the Dallas-Fort Worth, Texas, area, delivers comprehensive logistics engineering analysis, design and consulting to manufacturing, distribution, and retail companies.

www.transplace.com **888-445-9425**

Globe Express Services (GES)

WHAT'S NEW: A European office.

THE VALUE: GES opened its first European office, and its 38th worldwide, in Dunkirk, France. The office serves the company's customers in northern Europe.

www.globeexpress.com **800-874-8827**

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www.ryder.com
888-88-RYDER

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www.cevalogistics.com
904-928-1498

Are you ready to improve profitability, competitiveness, and growth by moving beyond efficiency inside the warehouse to creating value across your entire demand and supply chain? Then you're ready to request this free brochure from **Infor**. Learn how Infor *SCM Warehouse Management* delivers the functionality for achieving operational excellence inside the warehouse, and creates value by extending warehousing capabilities and expanding ROI outside the warehouse.

www.infor.com
800-260-2640

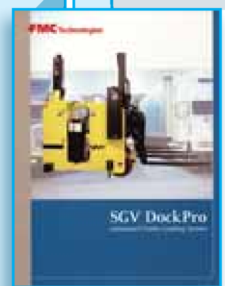
It is becoming increasingly difficult to visit all the relevant trade shows. As a service to readers, *Inbound Logistics* brings the information from show exhibitors to you. Just call or visit the exhibitor Web sites to make your requests.

Bourque Data Systems (BDS) provides transportation software and services that address complex, multi-mode logistics operations. Its software tools streamline shipment operations, tracking, fleet accounting, freight payment, supply chain and VMI programs. BDS's data services connect you to suppliers, customers, carriers, and vendors, while logistics support optimizes shipment and fleet management. Ready to get started? Request a copy of this free brochure.

www.railtrac.com
281-362-1513

When you need complete turnkey RFID integrated application solutions, turn to **The Kennedy Group**. Its RFID Group is a full-service provider of solutions designed to improve supply chain performance and meet strict Electronic Product Code compliance mandates. This brochure contains full information on the company, its RFID Customer Solution Center, and its extensive line of RFID applicators, labels, placards, and tags.

www.kennedygrp.com
440-951-7660



Improve loading dock safety, reduce labor costs and product damage, and enhance materials tracking with **FMC Technologies'** SGV DockPro automated trailer loading system. This brochure describes how DockPro vehicles move in a predictable, controlled manner with safety sensors, and how the system tracks all materials movement and accommodates multiple trailer loading patterns. The brochure describes vehicle features and specifications in depth.

www.fmcsgvs.com
215-822-4300

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RE-THINKING THE SERVICE SUPPLY CHAIN FOR CUSTOMER SERVICE

Case Study for Pitney Bowes Document Messaging Technology Division

BACKGROUND

Pitney Bowes (www.pb.com) is a mailstream technology company that helps organizations manage the flow of information, mail, documents and packages. The company supports businesses with postage meter needs through its Global Mailing Division and supports organizations with requirements for extremely high velocity mailings through its Document Messaging Technology Division (DMT).

Pitney Bowes manufactures and services equipment that supports the flow of millions of pieces of mail on a daily basis, from customizing and printing, to sorting and attaching postage for invoices and direct mail. The company serves the needs of large-scale operations such as credit card and utility companies.

CHALLENGE

Pitney Bowes Document Messaging Technology Division employs 900 service personnel to support hundreds of customer locations. Its customers rely on them to provide near-perfect uptime. At a rate of 22,000 pieces of mail per hour for some equipment, only a couple of hours without the ability to invoice end-customers can translate to a loss of revenue. To meet these extremely demanding service level agreements (SLAs), Pitney Bowes attempted to stock the majority of parts on-site at each client installation. This included both lower-cost, more frequently replaced parts, as well as high-value, low-turn parts at all locations resulting in significant expense, despite excellent customer service ratings.

In 2007, Pitney Bowes evaluated its service supply chain strategy, with a goal to reduce service inventory from $26.1M to $22.5M.

CUSTOMER QUOTE

"We appreciate Choice's flexibility in helping to facilitate this pilot program, which was significantly smaller in scale compared to the work they do with other companies on a day-to-day basis,"

"This was critical to demonstrate their value proposition and provided the case to expand the relationship. While this was an initial pilot program, we never felt that we were secondary to other customers. From management, to operations, to IT, everyone at Choice has worked closely with us to make our operation successful. We are delighted and couldn't be more satisfied with the results."

Mark Doane, Logistics & Business Support Manager, Pitney Bowes Document Messaging Technologies

Pitney Bowes

RE-THINKING THE SERVICE SUPPLY CHAIN FOR CUSTOMER SERVICE

Case Study for Pitney Bowes Document Messaging Technology Division

SOLUTION

Choice Logistics was selected as the third party logistics (3PL) provider of record for service parts and was challenged to develop and establish a pilot program that would demonstrate the value of a more streamlined service parts logistics process. Choice and Pitney Bowes worked collaboratively to create a business case for strategic, rather than on-site, stocking of service parts and instituted a pilot program.

The program focused on two primary geographic locations: Columbus, Ohio and Edison, New Jersey. This was based on the high concentration of Pitney Bowes customers in these regions that could be served within a two-hour timeframe by a strategic stocking location (SSL). Once the Choice and Pitney Bowes team identified the two locations to meet client demands, they began stocking expensive, low-usage critical parts in both locations.

RESULTS / BENEFITS

The first pilot was located in Columbus, where Pitney Bowes consolidated parts that were servicing eight customers into one centrally located SSL that delivers within a two-hour SLA. For the Edison location, Pitney Bowes stocked parts in the SSL that were previously distributed among 16 client sites.

The results were dramatic and tangible. First, and most importantly, Pitney Bowes successfully maintained their superior customer service. After just one year, the company realized a 25 percent reduction in service parts inventory at each of these pilot locations.

Plus, these two locations are now supporting other markets for next-day delivery of parts that are typically stocked at Pitney Bowes' primary distribution center that is located in an area that does not facilitate same-day or next-day parts delivery. This results in the added benefit of additional points of distribution, which improves customer service, while reducing overall cost.

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3PLs

APL Logistics • www.apllogistics.com

Among the foremost providers of international integrated supply chain solutions, APL Logistics combines origin and destination logistics with multimodal transportation services. Our offerings are enabled by industry-leading IT and data connectivity tools that provide increased product visibility and better inventory management to meet changing market conditions. With distribution and logistics capabilities in the world's major sourcing and consumer markets, our focus is on helping companies–particularly those in the automotive, electronics/hi-tech, and retail/apparel sectors–drive efficiencies and improve flexibility in their supply chains.

Diamond Logistics • www.diamondlogistics.com

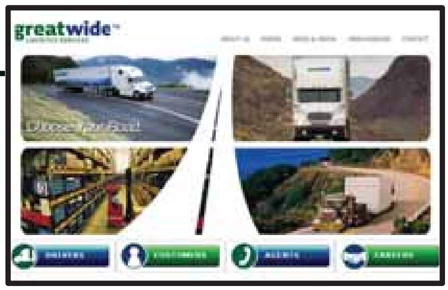
As a third-party logistics company, Diamond Logistics offers a full range of quality customized global transportation, logistics, and retail supply chain management solutions that afford customers a distinct competitive advantage. As a non-asset-based logistics provider, Diamond Logistics has the independence to make selections based on your needs alone. Let Diamond Logistics be proactive for you; visit the Web site today for more information.

Dimerco Express • www.dimerco.com

Over the course of more than 36 years, Dimerco has progressively expanded its service network on a global scale, especially in Greater China. At the same time, it has upgraded its e-commerce platform, the Dimerco eChain System, to meet the needs of global customers. For more information on Dimerco's logistics services – including air and ocean freight, customs brokerage, warehousing, trucking, and consultancy – visit the Web site.

Greatwide Logistics Services • www.greatwide.com

Dallas, Texas-based Greatwide Logistics Services is one of the nation's leading non-asset-based transportation, third-party logistics, warehouse/distribution, and truckload brokerage solutions providers. By operating four primary business units–dedicated transport, truckload management, truckload brokerage, and distribution logistics–Greatwide Logistics Services can provide its customers with a fully integrated range of transportation and logistics management services.



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3PLs

Metro Park Warehouses • www.metroparkwarehouses.com

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Priority Solutions International • www.prioritysolutions.com

Priority Solutions International is a full-service global logistics provider. Since 1983, we've built a reputation for excellence in handling all types of shipments, from one pound to hundreds of tons. We specialize in high-touch distribution, fulfillment, and transportation of time- and security-sensitive shipments. Our clients include Fortune 500 pharmaceutical companies and the U.S. military. Most of our clients require a significant level of flexibility, accuracy, accountability, and cost-effectiveness. Have questions? Contact: transportation@prioritysolutions.com or visit www.prioritysolutions.com.

SEKO • www.sekoworldwide.com

SEKO prides itself on a commitment to customer service, whether it's a 2 a.m. pickup for a critical industrial part for a plant that is 4,000 miles away, or the cost savings achieved from proactive communication with your vendors overseas. SEKO offices have the knowledge and expertise to expedite or to consolidate, depending on your need. From Hong Kong to Amsterdam, SEKO knows how to serve its clients. As a non-asset-based third-party logistics provider, SEKO has the flexibility to meet your supply chain needs using a variety of modes and carriers.

SMART Management • www.smartmanagementgroup.com

Let SMART Management, part of the CTX Group, become your logistics partner and a vital part of your transportation and distribution network. SMART Management's skills in operational logistics can help fulfill your supply chain demands. We have the systems, procedures, technology, and people to manage inventory, products, and vehicles to their destinations. Our track record of success stems from continuous collaboration and streamlined communication with partners, customers, drivers, and vendors.

Sunrise Logistics, Inc. • www.sunriselogisticsinc.com

At Sunrise Logistics, we specialize in delivering supply chain solutions customized to fit your needs. Let our team of experts help you plan for long-term success, while responding to the daily challenges of business. Services include: temperature-controlled freight; competitive just-in-time deliveries; third-party storage and forward logistics; intermodal and backhaul opportunities; state-of-the-art storage facilities; value-added logistics services; and leading communication technologies. Check out our Web site or call us today at 888-518-8502.

COLD STORAGE

United States Cold Storage, Inc. • www.uscoldstorage.com

United States Cold Storage, Inc. is a premier national provider of supply chain services with more than 150 million cubic feet of convertible temperature storage space. We operate a logistics network of 30 modern refrigerated warehousing and distribution centers convenient to major food processing and marketing hubs. Customized services include blast freezing, import and export services, packaging, trans-loading, and freight consolidation. We feature PDQ LOGISTICS cost-saving transportation services, USCS TASKMASTER for RF bar-code warehouse efficiency and accuracy; and eUSCOLD Web-enabled services.

FORKLIFTS

Doosan • www.doosanlift.com

From internal combustion and electric trucks to skid steer loaders and telescopic handlers, Doosan Infracore can help you lift your dreams. Keep your materials handling operating and maintenance costs low, while boosting efficiency with Doosan Infracore's industrial vehicles. The Web site features product specifications, and lists the company's global branch offices to make it easy to find what you need. For details, log on to www.doosanlift.com.

Landoll • www.landoll.com

Landoll's Bendi and SwingMast lift trucks can solve your materials handling challenges through increased productivity and flexibility. The Bendi lift trucks provide the world's first 180-degree front-wheel-steered design, giving you unmatched maneuverability in narrow-aisle storage. The SwingMast design offers a 90-degree rotating mast front or side loader that can stack loads in 56-inch aisles. To see how these two narrow aisle lift trucks can make your operation more productive, view the specification sheets on the Web site.

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Forklifts–Printers

TCM Distribution USA • www.tcmusa.com

Whether you need electric motor sit-down rider trucks; IC engine trucks; or fork, counterbalanced, cushion or pneumatic tire trucks; TCM Distribution USA has the lift truck for you. The trucks feature powerful AC motors that deliver superior regeneration with less maintenance; onboard diagnostics and full instrumentation; extended run times with controllers that provide twice the battery life; and precise handling and load control. TCM has also introduced the FTB VII series of electric three-wheel forklift trucks. Need more information? Log on to www.tcmusa.com today.

The Raymond Corporation • www.raymondcorp.com

The Raymond Corporation is the North American leader in the design and manufacture of the best-built, best-performing, and most reliable electric lift trucks. Behind all Raymond products is its wealth of expertise and deep commitment to electric lift truck research and development. Raymond continuously focuses on improving customer operations and is dedicated to understanding your requirements. What features are important to your operation? How can we make your job easier? How can we make you more productive and efficient? This philosophy positions Raymond at the forefront of the lift truck industry, pioneering leading-edge concepts.

Tusk Lift Trucks • www.tusklifttrucks.com

Whether you are a grocer challenged by better space utilization, a pharmaceutical distribution center dominated by narrow aisles, or even a paper warehouse managing multiple-sized pallet loads, Tusk has the right lift truck to meet your exacting standards. From warehousing to building materials, beverage to rubber products, Tusk has the lift truck answer. Tusk is proud to provide a complete line of equipment to meet a broad array of applications in a variety of markets. Please visit the Web site for more information.

PRINTERS

Datamax • www.datamaxcorp.com

Datamax offers a full line of handsomely designed printers, with unmatched rugged and reliable performance in a compact footprint. The Compact4 Mobile is designed for installation on forklift trucks and mobile stations. It can operate from a connection to a forklift's battery and its vibration-proof design makes it the perfect choice for warehousing logistics. When you're looking for printers, look to Datamax.

IN THIS SECTION:

TMS–Yard Management

TMS

Shippers Commonwealth • www.shipperscommonwealth.com

Shippers Commonwealth provides sophisticated TMS solutions for shippers or receivers of any and all sizes. Our self-funded TMS programs pay for themselves in months. We at Shippers Commonwealth believe in the "customer for life" philosophy; just ask any of our customers. Visit our Web site for more information on how we can cut your freight costs.

TRUCKING

4 Way Logistics • www.ltlmarketplace.com

If you're wasting time contacting a number of LTL trucking companies to find the right price, check out 4 Way Logistics' easy-to-use freight portal. Access rates, transit times, and service area options in seconds to easily compare and choose the solution that meets your needs. Once 4 Way sets up the system with your information and pricing, you simply log in to review the data and make your own LTL transportation decisions. Sign up now at www.ltlmarketplace.com

UTXL • www.utxl.com

Whether you need a core transportation service provider or a resourceful backup "relief valve," turn to UTXL. UTXL handles truckload and multiple stop shipments (consolidated LTL) between any points in North America, and can arrange service to or from any state with satellite and/or cellular equipped teams and single drivers for your van, reefer, flatbed, or oversized shipments. Shippers nationwide rely on UTXL for reliable service and economical prices; you can, too. Check out the Web site for all the details.

YARD MANAGEMENT

PINC Solutions • www.pincsolutions.com

Yard Hound™ from PINC Solutions is the answer to your least-talked-about bottleneck in the logistics system: the yard. Increasing yard operations efficiency may be the next great opportunity to improve your logistical performance. With real-time visibility of all your yard activities accessible through a Web-based platform, managing yard operations becomes an integral part of your supply chain management practice. No longer is there a missing link between the warehouse and transportation logistics. For a Yard Hound Web presentation visit www.pincsolutions.com.

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3PLs

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- **Automated Distribution Systems (ADS)** pg. 61
Automated Distribution Systems' state-of-the-art technology makes it an award-winning 3PL. Companies needing customized distribution and fulfillment services should get acquainted with ADS offerings.
www.adslp.com 864-902-0540

- **Averitt** pg. 5
You need customized solutions that will reduce costs and increase the velocity of your network. Averitt offers fully integrated, built-to-fit programs for effective sourcing, manufacturing, order fulfillment, and transportation services.
www.averittexpress.com 800-AVERITT

- **BNSF Logistics** pg. 33
BNSF Logistics puts your logistics pieces in place so you can focus on business. Combining expansive knowledge with integrated technology systems, BNSF streamlines your organization.
www.bnsflogistics.com 877-853-4756

- **Choice Logistics** pg. 97–98
Choice Logistics' comprehensive infrastructure of systems, processes, and secured sites provides end-to-end inventory management for direct parts deployment 24/7. Choice understands the challenges and opportunities imposed by stringent client requirements.
www.choicelogistics.com 212-370-1999

- **CRST Logistics** pg. 3
CRST Logistics can solve any shipping challenge, including yours. With more than 22,000 transportation and logistics service drivers to draw from, CRST multiplies your resources for greater ROI.
www.crstmalone.com 800-366-6361

- **Dimerco Express Group** pg. 31
Established in 1971, Dimerco Express Group is an Asian multinational company operating in 17 countries. Dimerco is ready to provide logistics services both in and out of China and Vietnam.
www.dimerco.com 905-282-8118

- **FAC Logistics** pg. 57
If you ship or receive food products, you need to know FAC. Food service logistics is FAC's business...its only business. Contact FAC for a review that will demonstrate all the benefits of dealing with a food service logistics specialist.
www.faclogistics.com 800-285-7004

- **ICS Logistics** pg. 53
ICS Logistics and Great Lakes Cold Logistics have joined forces to become your total storage and distribution solution, with facilities strategically located in Florida, Ohio, and Pennsylvania.
www.icslogistics.com 904-786-8038

- **Landair** pg. 67
A lot of companies talk about integrated supply chain solutions–Landair doesn't just talk, it gets it done. Landair offers supply chain solutions that improve your bottom line.
www.landair.com 423-783-1230

- **LTD Supply Chain** pg. 84
LTD's supply chain solution meets your market, supplier, and customer requirements to reduce logistics costs, increase inventory turns by up to 50 percent, compress cycle time, and improve customer service.
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- **Lynden** pg. 19
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- **TransComp & Intermodal Expo** pg. 92
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THE LAST MILE

A Real Motion Picture

Imagine a movie premier where the stars roll up to the red carpet in tricked-out tractors complete with 600-horsepower Cummins ISX engines, 10-speed manual transmissions, chrome-laden grilles, stainless steel air cleaners, Hell-inspired paint jobs, and anatomically accurate, politically incorrect mud flaps.

There is no chauffer. There is no pretense. And, yes, "formal" includes leather, denim, and baseball caps.

Imagination may inspire reality if Academy Award-nominated documentarian Brett Morgen has any say in the matter. As testament to the work ethic and entrepreneurial spirit of the hard-working men and women who haul freight for a living, Morgen takes to the highway in his new owner-operator biopic, *Drive and Deliver*.

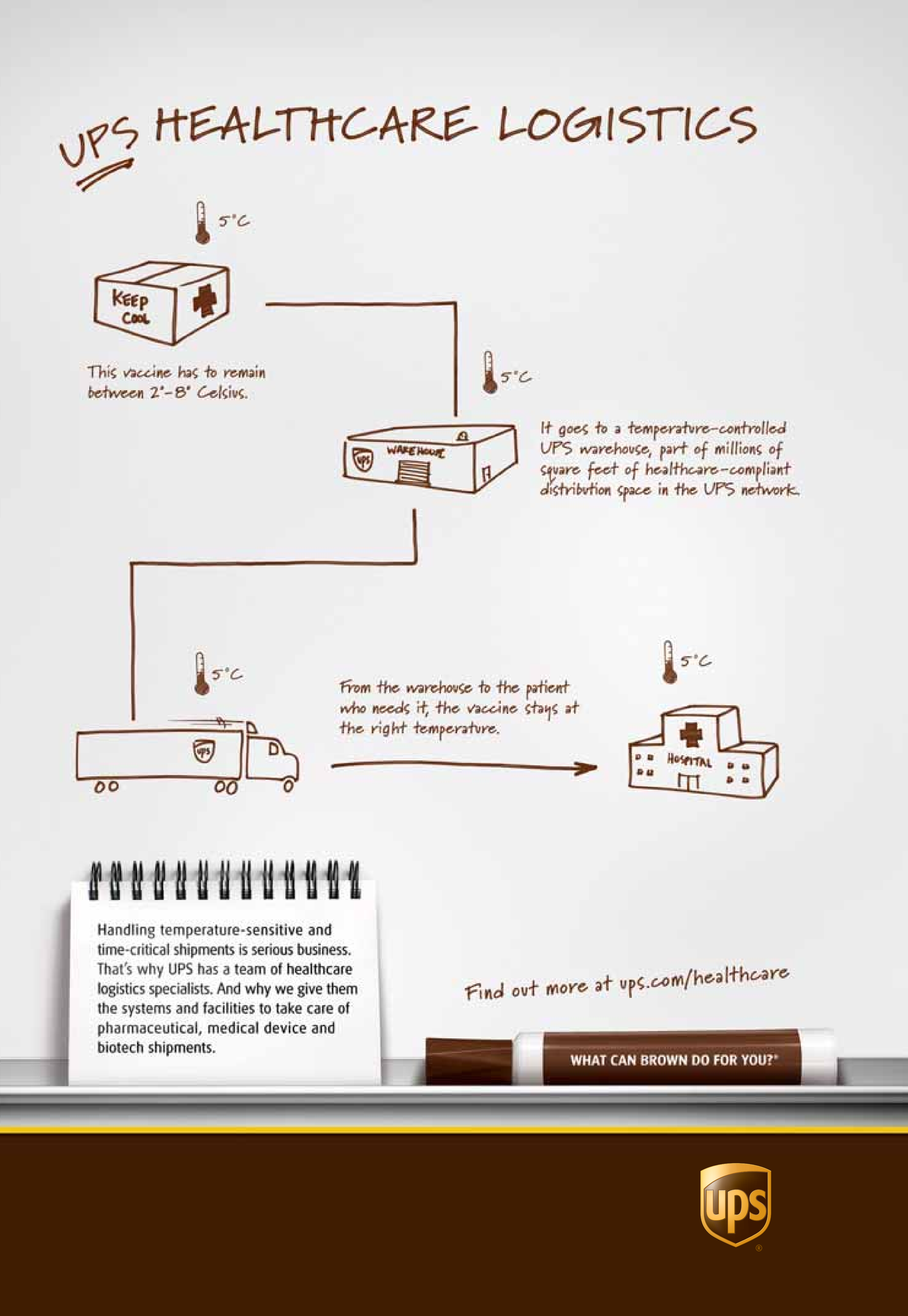
The film, which premiered during the Great American Trucking Show last August, stars three unlikely celebrities who share what it really means to be a trucker–the nitty gritty details of delivering goods and promises across the country.

Meet Steven Donaldson, a 58-year-old father of three and trucker for life. He owns lots of toys–a Harley, several ATVs, even a helicopter. He also owns a fleet of work trucks, from heavy-duty vehicles to long-haul rigs.

Tim Young is a family man with Southern charm and the lean, long-legged gait of a Clint Eastwood. He wears cowboy boots and a hat, and carries himself as if he were born in a saddle. A native Alabaman, he currently pulls a tanker during the week and comes home to his three kids and wife of 20 years.

Twenty-eight-year-old Chris Lecount lives in Goshen, Ind., with his wife and parents on his family's homestead. Chris happily supports his brood and claims his favorite pastime outside of driving is to sing karaoke with his trucker buddies.

Audiences will surely stand together in applauding the people driving our country forward. ■



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